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Biological & Medical Serials

Vol. XII.—No. 5.] [Whole No. 69.

NEW YORK MEDICAL JOURNAL.

STORAGE

DECEMBER, 1870.

EDITED BY

EDWARD S. DUNSTER, M. D.

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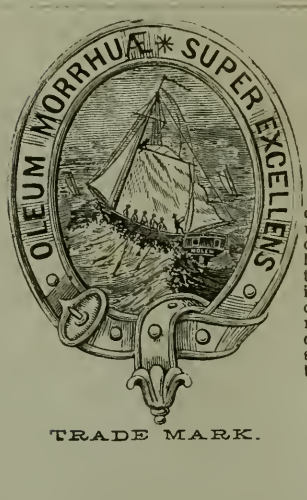

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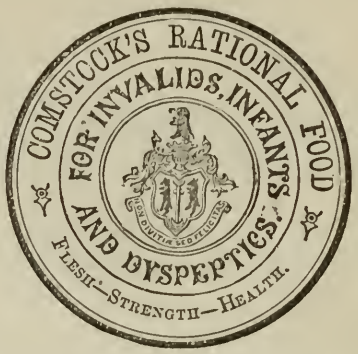

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MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

VOL. XII.] DECEMBER, 1870. [No. 5.

Original Communications.

ART. I.—*The Relations of the Medical Profession to Modern Education.*—An Address[1] delivered at the Commencement of the Medical Department of the University of Vermont, June 16, 1869. By EDWARD S. DUNSTER, M. D., Professor of Obstetrics and the Diseases of Women and Children.

THERE is no question, perhaps, at the present day, which has so large and many-sided an interest for almost all classes of society as that of education—education, I mean, in its broadest sense, as applied to whole peoples, and not in its old acceptation of overculture of the few, or its still more subordinate aspect of teaching, which is but one of the means to the end of education. This question has assumed various phases and vast proportions, for it has a direct bearing on the material progress of society, and its advance in civilization. For this reason it has directly engaged the attention of our ablest scholars and keenest thinkers, and indirectly the opinion of the people has been unmistakably made manifest, by their distrust of the old systems of education, and their demand for a new, better adapted to fit the growing mind for the impor-

[1] This Address was also read, a week later, at the commencement of the Long Island Hospital College, Brooklyn, N. Y.

tant responsibilities of life. The question has elicited the most antagonistic opinions, and powerful arguments have been put forward in favor of the opposing lines of policy which are advocated by different parties. It is a question, however, that cannot be decided by argument, precedent, or authority; its solution is to be found in the relation which obtains between the demands of life and the existing systems of education. And, although I hold that we ought all to have sharply-defined opinions on a subject which is so important a concern of all, it is no part of my plan at the present time to enter into the controversy, nor to advocate either the classical or the utilitarian studies. But, keeping aloof from the questions immediately at issue, and from a distance, as it were, observing the progress and tendency of events, and accepting the situation precisely as it presents itself to my view, even if it does not accord with cherished wishes or convictions, I purpose to consider simply the relations which the medical profession should sustain to this work of the new and the incoming education.

The solution of this problem necessitates two other inquiries: 1. What is the general tendency of modern education? 2. What is it that is shaping and directing that tendency? The answer to these inquiries will be apparent as we proceed.

I.

"Modern civilization," says Prof. Huxley, "rests upon physical science," and herein we find the explanation of the rapid advance which civilization has made during the last century, in which time the experimental and applied sciences have been especially active. The prominent features of this new era are sharply defined, and the basis upon which they rest is apparent almost at a glance. The most careless observer cannot fail to be impressed with two characteristics of modern civilization, wherein it is immeasurably superior to the old order of things. They are, *locomotion and interchange of thought.* The improved methods of locomotion have virtually shortened distance, and brought the ends of the world into close relation; while the telegraph, flashing thought from city to city, and from continent to continent, gives us a knowledge of

events that are taking place in far-off lands, and, so far as the interchange of thought is concerned, it has practically annihilated terrestrial space. The printing-press, also, by the marvellous rapidity of its processes, and the wonderful cheapness and unlimited supply of its products, diffuses thought throughout the whole civilized globe, and places within the reach of everybody the means of acquiring and extending knowledge. Now, these potent civilizers are the direct and immediate creations of science. Without it no one of them could have been devised or perfected—no one of them could continue in existence. To illustrate: The invention of movable type was the starting-point in that remarkable series of improvements which have brought the printing-press to its present perfection. But the full benefit and the prodigious expansion of that invention could never have been realized, had not science come to its aid in the application of the laws of mechanics, of the expansive power of heat, of the chemistry of the metals, of the economy and transmission of power, of the strength of materials, of motion and resistance, etc.; and even all these would practically have been of no avail, had not science devised the means of furnishing a supply of material for receiving the impressions of the type. Indeed, it has been playfully maintained that civilization depends for its continuance on the supply of paper. In the improved methods of locomotion and in the telegraph, it is equally evident, without specifying details, that science is the leading factor.

In addition to these prominent and distinctive features of the present era, we need only look at the industrial pursuits which are alone productive of material prosperity and wealth, to see how largely science has contributed to civilization. She has impressed upon these pursuits new features: 1. In the form of production; 2. In the transformation of the products; and 3. In their distribution. Even in agriculture, the most simple and unskilled of all these pursuits, whose purpose is merely to draw from the earth the means of subsistence, there is implied a knowledge of the physiology of plants, the chemistry of fertilizers and soils, the economy of force, and the application of machinery; and, just in proportion as these scientific principles are understood and applied, is

success attained in this branch of industry. Indeed, in the struggle for life, there is no chance whatever between unskilled and skilled labor. This conviction is forcing itself upon our agricultural classes, and they are hastening to avail themselves of the methods and results of the applications of science to their occupation, although they may be in entire ignorance of the laws on which those applications are based. In this way not only the quantity but the variety of the earth's vegetable products has been materially increased. So, too, with the mineral products, which have been so bounteously stored up within the substance of the earth. Science has provided the means of extracting them, and making them subservient to man's interests.

2. In the transformation of these products is seen a still more remarkable evidnce of the impress of science on our civilization. New products are evolved by the separation or combination of the old, and the old are worked over and reappear in countless new shapes adapted to the necessities and convenience of man. Materials that were considered worthless are turned to profitable account, and made to minister to our daily wants. Each new supply creates new demand, while the never-ending demand of the advancing arts is met by new sources and means of supply. Thus the rude tastes and simple wants of the olden times have given place to the refinements and luxuries of modern life, not because man is more effeminate or degenerate, but because of the new relations imposed on him by the ever-changing conditions of civilization. These refinements and luxuries have become so interwoven with his daily existence that they must now in a large degree be looked upon as essentials. This feature of modern civilization is directly traceable to the application of science in the arts and manufactures. The invention and perfection of the steam-engine have furnished the means for the practical application of the laws of the expansive power of heat, and have thus made available a limitless supply of motor power for our manufactories. The laws of mechanics, which are based upon the laws governing the movement of solids, fluids, gases, and vapors, are applied to the construction and operation of machinery. Chemistry has devised new processes in the arts, and explained the old; in-

deed, so numerous and important are its applications, that there is hardly an art which is not indebted in some way to chemistry for the advance which it has made or which is not absolutely dependent upon chemistry for its every-day processes. Even the imponderables, light and galvanism, are made subservient to man's material interests, and it is impossible to anticipate what limits may yet be set to their application and usefulness. But it is unnecessary to pursue this illustration further. It is almost a self-evident proposition that science, applied to the arts and manufactures, is the prime motor in this transformation of products.

3. In the distribution of these products we can trace clearly another prominent feature in the influence of science upon the industrial pursuits. The application of steam to the purposes of locomotion and transportation has subverted to a large degree the old methods of the distribution of supplies. It has rendered both possible and profitable the bringing of raw materials from all quarters of the globe, and the placing back in return the manufactured products. Thus by the facilities afforded for communication between distant countries, and the economical carrying of large quantities of materials, it has both increased the demand for these products, and has enabled the supply to be adequate to the demand. Science has brought to bear its forces in the solution of this problem, for, underlying the whole, there is implied a knowledge of the workings and applications of many of the laws which, as we have seen, are applied in the other phases of the industrial pursuits. The illustrations are, however, so obvious, that it is quite unnecessary to enumerate them.

We discern in these considerations the first great *material* ground of the claims of science to recognition in education.

But, furthermore, science in recent times has been directed to the explanation of the physical and physiological laws whose workings, although not apparent to the superficial or hasty observer, are constantly manifested in all our surroundings and the conditions of our existence. Man, considered collectively, is unquestionably subject to the influence of these laws. It is the business of science to determine what these laws are, and what are the mode and limit of their action and

their possible modifications; for "science," to use the words of Mr. Hodgson, "is, in brief, the pursuit of law," or, in the still more concise phraseology of Herbert Spencer, it is "organized knowledge." By the exposition of these laws, then—another prominent feature in modern civilization—science takes cognizance and control of the most important questions of life affecting man in his social capacity and relations. Now, these questions, constituting the body of social science, or sociology, relate largely to the conservation of life. They have therefore a special and peculiar interest for all, and they establish a *second* fundamental claim for the recognition of science in education.

Finally, science has an important function to fulfil in training the mind to correct habits of thinking, and disciplining the mental powers. It is folly to assert that this can only be accomplished by the study of mathematics and the languages. Observation, comparison, classification, reasoning on external phenomena, and exercising the memory, are carried to as high a perfection in the study of the natural sciences as in the intricacies of the calculus, or the inscrutable mysteries of grammar. This is another consideration, substantiating the claims of scientific education, for there can be no doubt that, in the training of the young mind, the disciplinary value of the studies pursued should always be kept in view.[1]

[1] A writer in the *Edinburgh Review*, for January, 1868, on Liberal Education in England, gives the following testimony in favor of scientific studies—testimony which is all the more weighty from the fact that the whole bent of his argument, except this admission, is to sustain the classical studies, but not, however, as they were then studied in England. Speaking of the physical and natural sciences, he says: "Valuable for their own sake, they are also useful for the sake of every thing else. It is in these sciences that the intellect of the age we live in is most active and progressive. It is by the order of mind to which the study of these sciences is conducive, that our civilization is chiefly guided and controlled. The treasures wrung from that study constitute the richest heir-looms in the power of this age to bequeath to posterity. If we look to what should be the grand object of all study, namely, the formation of mind and character, we shall assuredly be compelled to admit that there is no kind of study so conducive to its attainment as science. For there is hardly any mental or moral faculty which science does not exercise, discipline, and develop better than any thing else which a man can set himself to learn."

II.

These great facts, which have been long familiar to careful observers and cautious thinkers, are now clearly perceived by all peoples, and the consequence has been a growing dissatisfaction with the traditional systems of education, and a demand for a culture which shall distinctly recognize this material element in a nation's progress, shall take into account the changed conditions of modern life, and shape the growing mind into harmony with them. This dissatisfaction has at length organized itself into open revolt, and the whole educational system, from top to bottom, is under arraignment. Our colleges and higher grades of educational institutions are indicted as clinging to an outworn curriculum, whose only effect is to overload their graduates with a mass of antiquated lore, which, while it may fit a man for the occupation of a gentleman, does not contribute largely to his usefulness as a member of society—does not even qualify him for the ordinary avocations of life. The lower grades of schools are charged with adapting their studies simply to meet the demands made upon them by the higher, acting as it were as feeders to these last. This influence extends even to the lowest and most primary of our schools, whose elementary instruction, it is claimed, loses sight of the great principle, which should constantly be kept in view, of training the young to meet and grapple with the realities and responsibilities of life. In short, the entire existing systems of education are declared unsatisfactory and inadequate so far as concerns the fitting of man for action, and action implies labor, and labor by divine command is ordained as the *great* and *only essential* condition of life.

This cry for reform is already producing its results, and a reaction has commenced which threatens to entirely subvert the old method of education, and possibly even to lose sight of the real value of the old studies, and so produce injurious results by giving a discipline and a culture as one-sided and unsymmetrical as was the old. The evidences of the new order of things are seen on every side. In our colleges, not only has the curriculum been remodelled, allowing a wide election in the mathematics, pure and the classics, but supplementary depart-

ments devoted exclusively to scientific instruction are everywhere being established. Special schools, for the technical education and scientific training of the large classes who will not attend college, are springing up all over the land, and in the various countries of Europe. In the lower grades of schools the plans of instruction give a greater prominence to the utilitarian studies; and even at the very outset young children, by the method of object teaching now so largely introduced, are made familiar with many of the principles and applications of the physical sciences long before they know even the meaning of the word science.

And while scientific education is thus forcing its way in our institutions of learning, its claims to recognition, not only as an integral part, but as a controlling influence in our system of education, are evidenced in many other ways. It pervades the periodical literature of the times; even the daily press has entered into the discussion of the question with an enthusiasm which, although not always based upon very clear views as to the necessities of the case, or the true principles which should underlie every method of education, is a reflex of the popular sentiment, and an evidence of the very general interest which obtains in this matter. It has received the indorsement of many of the most eminent men of the day; and, while it is true that a strong fight has been made by many distinguished men for the old order of studies, the weight of authority has preponderated largely in favor of the sciences. Even those who have taken the broadest view of the question, such as Mr. Mill, Lord Stanley, Mr. Farrar, and others, have made powerful arguments in favor of the scientific studies, both as a means of increasing knowledge and as a method of disciplining the mind. Others, equally eminent, like Profs. Huxley, Tyndall, Henfrey, Paget, Baron Liebig, Mr. Froude, Herbert Spencer, and many more, have not hesitated to throw the weight of their authority in favor of the superior claims of scientific studies, and to insist upon the necessity of a greater and increasing degree of attention to them.

It is curious to observe at this point that, almost without exception, the men who have made the strongest claims for science are men whose early education had been conducted

under the old method. Some of the profoundest classical scholars that our universities have produced have been the most bitter opponents of the old system of education; and in England, famous for its conservatism and attachment to traditional systems, the changes which have been brought about can be directly traced to the efforts of her most brilliant classical scholars. There seems to have been a very general conviction that their culture had been disqualifying for their lot in life, their studies misdirected, and their time misspent.

Looking at it, then, as we do, from an outside point of view, it is clearly evident that we have fallen upon a transition-period, when the old is to be in a large degree abandoned, and the new is to be arranged. How far the two shall be united—for it would be eminently disastrous to entirely abolish the first—it is difficult to say; but the unmistakable tendency is toward the scientific studies. The tide has set in so strongly in their favor that it cannot be turned back, and he who opposes it must beware lest he be swept away and overwhelmed in the torrent. The opinion of the people has been taken, and the verdict which they have rendered must be accepted as conclusive. Education is every day becoming more and more a serious matter of training the young for meeting and surmounting the realities and responsibilities of every-day life—the mathematics and the humanities must be subordinated to the physical sciences.

This may be a material and utilitarian view of things, but for this I am not responsible. It is the view which the masses of the people have taken of it, and it is my business now simply to state the case as it forces itself upon my observation, without allowing my predilections to influence judgment of the fact. It may be well, however, to remember that, although the issue is a material one to a certain extent, it is not directly between money-making, on the one hand, and a broad, dignified, and refining culture on the other, as the strict classicists are fond of asserting. The real issue lies far deeper than this, and is to be sought for in the problems and responsibilities of life, which, in a thousand different shapes pertaining to our social and material advancement, are crowding upon us every day, and which can neither be evaded nor postponed. These prob-

lems, "the safe and elegant imbecility of classical learning," as Sydney Smith calls it, is not competent to grasp or solve. From them it must inevitably shrink, to take refuge in its own legitimate sphere—the past. But the man of to-day does not live in the past, nor does he accord to it that veneration which was so long deemed its peculiar prerogative. He lives rather in and for the future, and progress is the high and guiding principle of his life.

I accept, then, this new condition of things, the two striking features of which are apparent and must continue, viz., the philosophical education of the masses, instead of the over-culture of the few, and the tendency toward scientific studies and pursuits—a tendency so strongly marked as to render inevitable the conclusion that the culture demanded by the incoming civilization will subordinate the old method of education to the new, and that the new must henceforth rely for its eminence directly, and in a very large degree, upon the study of the physical sciences.

III.

In this interesting change of policy, a revolutionary and reconstructive period in our mental development, in which all classes of society are so deeply interested, what are the duties of the medical profession? It is their prerogative and their duty to take the lead in the movement. This unqualified and somewhat startling assertion calls for the reasons on which it is founded; the claim must be substantiated before assent can be given to what, at first sight, and to many, will seem an entirely gratuitous assumption.

In man there is an instinctive knowledge of the superior power which superior education and intelligence confer on its possessors. This is continuously though unconsciously admitted in the every-day conduct of life; for it is a matter of simple observation that the masses of the people rely for instruction and guidance upon the educated classes. Reciprocally, these classes are bound, as it were, in certain duties to the people, and sustain to them certain peculiar relations. It is these relations in the matter of general education that we have to deal with. For our purposes it will be sufficient to

consider three classes only whose culture and attainments are closely allied to each other, and therefore comparable, and whose education *as classes* has been so liberal and complete as to have earned for them the title of "the learned professions" —a title, however, to which they can no longer exclusively lay claim.

True education itself is becoming more and more a recognized profession, and classes are trained for the details of this work in the matter of teaching; but teaching, as such, is not the only or even the most important part of education. Unless teaching be based on a proper conception of the objects of education, and on a thorough understanding of the nature of the being taught, it may prove not only useless, but injurious. And, besides, however perfect and complete may be the culture of the instructor, and however correct and exact the methods of doing his work, his relations to the other learned professions must, from the very nature of the case, ever remain unchanged.

Looking more in detail at the relations of these so-called learned professions to this question of modern education, it is easy to perceive that these relations grow out of the nature of their respective studies, which stamp upon each profession certain broad and obvious peculiarities. Of these three professions, then—clerical, legal, and medical—the medical profession alone has a training and a culture which are in harmony with the tendencies of modern thought and modern civilization, and on this is based the argument that they are to assume a leading part in the coming education.

The clergy are our traditional teachers. They have not only personally engaged in the work of education, but have directed the method and dictated the studies to be pursued. They practically, even at the present, monopolize all the high posts of learning. But a reaction has set in against their authority, and the unquestioning readiness with which assent has been yielded to their guidance is giving way to a positive refusal longer to submit to their control. Why is this? Not because they are clergymen, as has been flippantly asserted by some, and ignorantly supposed by others. The office of the clergy is no disqualification for the office of the educator. It is because they have failed to take into account

the changes which the advance of civilization has forced upon education, and have neglected to so alter their own education as to make it conform to the growing demands of science. "Content," says Dr. Draper, "with such a knowledge of Nature as might have answered a century ago, the imposing and ever-increasing body of modern science they decline. And yet it is that science and its practical applications which are now guiding the destinies of civilization." The training of the divinity-student for the highest functions of his office excludes much of that training which is so important an element in the new education. Having ultimate reference to the fitting of man for another life and another world, it overlooks in a measure the fitting of him for this life and this world. The languages are the predominant elements in this training, for they are the foundation of all his knowledge, the means which enable him to read and expound the revealed word; the keys which unlock for him the stores of patristic and scholastic literature; the media which acquaint him with the body of contemporary philosophy and of doctrinal and Scriptural exposition, which are such prominent features in his education. The sciences are unessential in his work and his culture. He derives no aid from them, takes no account of them, does not even recognize them.

But, independently of the fact that the culture of the clergy does not compass the scientific studies, the profession has, in the past, protested against the cultivation by others of these studies, and has strenuously opposed them. Time was, when science, such as it was, was confined almost wholly to the priestly order, and the alliance was conducive neither to the spread of true religion, nor the advance of science. Then, as science began to be studied apart, and to unfold itself and assert its claims, the profession looked on with distrust and suspicion. They estimated those claims by their own conceptions of truth. They assumed that the teachings of science would invalidate the trust in divine revelation. Hence arose that stupendous folly, which so long held sway, and for which the clergy were mainly responsible, that science and religion are incompatible, and which has compelled wellnigh every branch of modern science to put itself into an unsought-for attitude of

defence against this opposition. It is quite unnecessary to go back to the time of Galileo to find instances in point. To-day furnishes traces enough in the dread of free inquiry into the origin of races and species generally, a question which is prominently exercising the mind and engaging the attention of the scientific world. As science was largely engaged in searching out the secrets of Nature and unfolding her laws, it had to deal with material things. Thence arose the cry that the tendency of the study was materialistic. But in those very laws which science expounded, was it not more rational and more religious to recognize the simple yet grand expressions of God's will, rather than sink the prime moving cause in the mere working of law? In fact, science has furnished that great argument of natural religion, which deduces a First Cause from the evidences of design with its most striking and convincing illustrations. "Science," says Prof. Youmans, "is the revelation to reason of the policy by which God administers the affairs of the world." And every discovery which science has made only furnishes additional proof of the constant and overpowering control of a Supreme Being. Rightly interpreted, then, science, so far from fostering skepticism, is the most powerful agent in dispelling it—the strongest support which true religion can bring to its aid.

Happily for the world, this intolerance of science is rapidly passing away, and it cannot be said of the body of the clergy of to-day that they participate in it. But the legitimate result of this old opposition remains to some extent, and in it is found another explanation of the decreasing influence of the clergy in educational matters.

By these considerations, then, it seems to me apparent that the high position which has hitherto been accorded to the clerical profession, in their relations to education, cannot be maintained. In their capacity as conservators of learning, and as teachers under the old order of things, where a large part of their duty was to train up candidates for their own calling, they have accomplished a vast good, and they are entitled to all honor for it. But the qualifications which fitted them for this important office, in a former state of things, are no longer sufficient. The direction of their studies is faulty,

so far as relates to the new education, and the tendency of their studies is not in accord with the spirit of the age. Science has at length organized a revolt against their authority, and control in the educational field.

Now, consider for a moment the relations of the legal student to this question. He is engaged in the study of *human* laws which are made and unmade by legislation, and which many times are only the reflex of prevailing social or political necessities, assumed or real. Although the eternal principles of truth and justice are the basis of the superstructure which it is his business to build, precedent and authority are controlling and insurmountable conditions in that work. To quote the words of one who is himself a distinguished member of this profession: "He contributes little or nothing to the stock of human knowledge. He has given himself to the study and application of a science, if indeed it be a science, which as often deals with artificial principles and dogmas as with great abiding truths. In grasping at the philosophy of jurisprudence he is fettered, even in this day and generation, by precedents of scholastic absurdity which date back before the Wars of the Roses, and by statutes the very records of which were lost before the Reformation. The scientific aim and effort of his professional life are simply to show that '*thus it is written.*'" *Evidence*, than which nothing is more deceptive, is the material from which he must sift the truth, while *experiment* is the absolute and unmistakable test of truth in science. Science and its laws, which are not made and unmade, only interpreted by man, form no part of his education. And when, as is frequently the case, he is compelled to bring science to his aid in determining controversies or adjusting disputed questions, he very shrewdly relies upon the expert in science. As a class, the legal profession has never evinced any of that opposition to the claims of science which, as has been shown, emanated in former days from the clergy. No body of men have a keener perception of the truth that, while the exercise of private judgment is an unquestioned inherent right, the most precious, perhaps, of all our civil rights, such judgment, when exercised on subjects in which we are uninstructed, may put us all in false positions. They have therefore wisely

refrained from taking part in a work for which the peculiar nature of their studies and mode of thought is unfitted. And yet it cannot be denied that they have contributed to perpetuate the traditional systems of education by the very respect which their study compels for precedent and established custom. As a class, however, they have never taken any active part in the work of education. They have never in this relation had any recognized status, not even that which the breadth of their culture and the powerful influence accruing to them as incumbents of the highest executive and legislative positions clearly entitle them to, and there is no reason to hope for any change in this respect.

How stands the case now with the profession of medicine? It is the only one of the learned professions which does not plant itself on the dogmas of either authority, precedent, or tradition. Its doctrines are based upon the eternal and immutable laws of Nature, and are estimated by high scientific standards. Precedent and authority carry no weight here, except in so far as they accord with the principles which science has proven, and has established as reliable guides. There is none of that blind devotion to old ideas and methods which has so hindered progress in other callings, and which has rendered our educational systems so inadequate and unsatisfactory. The *old* is valued only as it squares with the *new*. The *past* is estimated solely by the standard of the *present*.

Not only does medicine thus discard authority, precedent, and tradition, but, first, its methods of study are purely scientific; and, second, its studies comprise the whole range of the physical sciences.[1] The knowledge of these sciences, which has so often and ignorantly been condemned as unnecessary to the practising physician, has of late years far outstripped all other branches of human learning. It is the application of these sciences in biology which has given the physician that truer insight into the nature of the living body with which he has to deal, upon which depends the proud eminence

[1] "Medicine, in its original and comprehensive sense, as one of the great divisions of human culture, must be considered as taking in the whole of physical science."—W. Whewell.

of the profession to-day. "The essence of science," says Prof. Acland, "lies in observation, comparison, and classification; in precision of data and precision of argument." This is precisely what is required in the study of medicine. Indeed, it may safely be affirmed that there is scarcely any thing true or valuable in medicine, beyond some of its therapeutical applications, which has not been wrought out and approved by scientific research. Observation, of course, is the basis of all knowledge; but, unless we do something more than observe—no matter how large may be the accumulation of facts—we can lay no claim to scientific method. There is not a single one of the physical sciences which is not contributory to medicine. On them the physician relies, and an understanding of, at least, the principles of them is absolutely essential in his study and his practice. Chemistry and mechanics, acoustics and optics, electricity and galvanism, the production and action of heat, the indestructibility of matter, the correlation and conservation of forces—these and all the other physical sciences are required to explain the many and varied healthy phenomena, or to correct the unhealthy phenomena, which are brought under the notice of the physician.

Covering thus, as it does, the whole range of physical sciences, and doing its work in strict accordance with scientific methods, medicine is entitled to rank as a science. It is constantly objected to this claim, that it is not an *exact* science. There is a very general, though vague, impression abroad that, while medicine is somewhat indefinitely scientific in its bearings, it is neither one thing nor another—a sort of a hybrid, entitled to no consideration whatever. Now, this objection can lie, to use a legal phrase, only against the *methods* of study and investigation which are employed, or against the *results* attained. It does not apply to the methods, for the methods are the same, as has been seen, that are employed in all other sciences, and as much nicety and precision are requisite and manifested here as elsewhere. As to the results, the objection at the present time is true to a certain extent. It arises from the great diversity of the study—including all the sciences—and the enormous number of interfering conditions met with in so complex a structure as man, the principal object

of the physician's study. But, as we advance in our study and perfect our methods of investigation, we are able to appreciate more accurately the value and significance of these disturbing conditions, and make allowance for them, just as the astronomer allows for the aberration in the movements of planets or for the effects of the refraction of light. Thus, we are, one by one, eliminating these sources of error, and gradually our results will approximate the accuracy of the fixed sciences. In its *essence*, therefore, both so far as concerns the methods of study and the results attained and attainable, medicine is an exact science. The study is only in its infancy when we take into consideration the period during which it has explicitly and directly called science to its aid, or, in other words, has had a scientific basis. Therefore, many of its laws are imperfectly elaborated, and many of its old errors are yet uncorrected. But the incorporation with it of advancing science is every day adding certainty to its results, overcoming former prejudices, and dissipating error. And in this very fact are founded the high hopes we entertain of the continued progress of Medicine, for she does not hesitate to acknowledge her error when new truth has convinced her of a mistake, and, however devoted she may be to-day to any theory or system, if to-morrow advancing science proves that theory or system incorrect, she will not let it encumber her progress, but will sweep it from her path as remorselessly as the whirlwind crushes down the forest in its destroying track. Hence the unnumbered remains, dead and dying, of erroneous doctrines that may be found scattered along the wayside of the historic march of Medicine.

It is apparent, then, that the medical profession, although trained for a specific occupation, must have a scientific education, and we have above seen that the tendency of modern education is in the same direction. "Scientific education," says Mr. Mill,[1] "apart from professional objects, is but a preparation for judging rightly of man, his interests and requirements." Now, if this assertion may be accepted as a postulate (and no one, I believe, can justly take exception to it), it

[1] Inaugural Address at the University of St. Andrews, February 1, 1867.

forms a strong point in our argument, that the physician must take control of the coming education; for his culture, and his alone, enables him to judge rightly of man, his interests and requirements. This is his peculiar office, the highest and most ennobling of his duties, and, in the use of the term education, we have expressly extended its application to the broadest limits, and have excluded its subordinate and narrow features.

The physician's studies were undoubtedly entered on with the professional aim of restoring the body to health when broken or disturbed by disease, but the very knowledge which enables him to do this is that which, according to Mr. Mill, is the aim of scientific education, and which is, therefore, indispensable to the educator. A knowledge of the being to be trained or taught,[1] it is evident, must underlie the whole subject of education, and form the basis of all intelligent culture. The physician alone is competent to supply this knowledge, which can only be acquired by a study of the laws governing the evolution and action of both mind and body, and which, as science has demonstrated, are determinate. This study, comprising psychology and physiology, is the peculiar province of the physician. Theology and law are powerless and utterly unavailing here. They cannot help us to this necessary knowledge, for they know nothing of it: their education has been directed in different channels to different ends. The physician has, therefore, in reality, to precede the educator, and determine and enunciate for him the laws upon which the healthful and vigorous development of mind and body depends. Thus is furnished a true physiological basis for education, and no system can be held faultless or complete which loses sight of this truly scientific study of human nature.

Then, as we proceed from the understanding of man, the

[1] "Man, as a problem of study, is simply an organism of varied powers and activities; and the true office of scientific inquiry is to determine the mechanism, modes, and laws of its action."—Prof. Youmans, *on the Scientific Study of Human Nature.*

"If there is any thing that deserves to be studied by man, it is his own nature and that of his fellow-men; and if it is worth studying at all, it is worth studying scientifically, so as to reach the fundamental laws which underlie and govern all the rest."—Mr. J. S. Mill, *loc. cit.*

being taught, and endeavor to judge of his requirements and interests, what a wide range of considerations is forced upon us here, wherein the medical profession alone can give an intelligent judgment! Apply these considerations to the body politic, rather than limit them to the individual, for thus their significance as objects comprised within the aims of scientific education becomes more apparent, and the importance of an acquaintance with the principles underlying them the more evident. There is scarcely a problem in sociology which does not bear upon this point, and which therefore comes within the legitimate scope of education. Thus we may instance the comfort and health of the community; the influence of the occupations on life; the deterioration of the race from residence in large cities and crowded districts, from inherited or transmitted diseases, from unhealthy occupations, from insufficiency or impropriety in food, from any cause whatsoever, affecting the capacity of a population for labor which alone is productive; the prevention of disease, endemic and epidemic, and the consequent saving of life, by the rigid application of the established principles of sanitary science; the proper equilibrium between work, both mental and physical, and repose; the care and training of the feeble-minded and insane; the management of criminals; the recognition of the influence of habit in developing mind and body, and therefore as an aid or a hinderance in education; the restraint or correction of the social evils; the explanation of the gross and wide-spread superstitions and ruinous mental and moral epidemics that sweep over our land;[1] the generally-recognized but illy-defined influence

[1] "The country is flooded with trashy and idle notions, taking on philosophical names, which owe their contagious spread to the fact that the widest interest in truth and the most active-minded curiosity exist in America, and is the prey of its own unscientific education, and of the pretenders, enthusiasts, and fanatics, that live by pandering to it, or are themselves spawned in its marshes of rank fertility. Now, it is only medical men who have much power to correct this perilous tendency, by their influence over popular education, their acquaintance with the sources of credulity, and the causes of mental epidemics, and their own rooted habits of cautious and precise investigation and slow and measured inference. Let the people be taught by medical men the unreliableness of their own senses out of the immediate sphere in which they are wont to use them; let them

of hereditary descent in producing certain aptitudes for good or for evil, and the means of correcting or restraining these tendencies when illy directed, or of developing them when pointing in a proper direction, as well as the uselessness of contending against them, except to protect the body politic from harm, when so far pronounced as to indicate organic irremediable defect. It is impossible almost to overestimate either the importance of the problems arising out of this single question, or the value of a knowledge of the limitations and modifications of this one item of inherited capacity in the mental, moral, and physical organization and development of a nation.

But it is unnecessary for our argument to continue these illustrations. These, and a host of other public objects and duties, are confronting us on every side, and we cannot escape from them. It becomes, therefore, a matter of some moment that our education should at least include a basis of training which, when carried out, will fit men to grapple with these serious responsibilities. The medical profession alone is the one whose training fits them for this work; they alone are competent to advise and guide the people in these matters; and in this we find another and powerful argument in support of the claim "that medicine," to use the words of Mr. Eliot, "as the science embodying, and as the art applying the laws of our existence, has a sort of a natural right to lead the way in the advancement of education."

Taking, then, into consideration all the arguments adduced, it seems to me that in some degree at least the startling claim for the relation of the physician to the educational problems of the day and of the future, has been made good. And yet, I do not entertain the opinion that this relation is to be speedily and suddenly assumed. This must be a matter of slow

understand the tricks of their own nerves and all the delusions short of insanity which the imagination plays on unscientific humanity . . . and just so far as they will labor and strive to disseminate these facts, the reality and force of which none but medical men fully appreciate and understand, may we hope to free our country from the bad reputation and the evil effects of the grossest medical superstitions and the most ruinous mental and moral epidemics."—Rev. Dr. Bellows, *Address at Commencement of the College of Physicians and Surgeons*, New York, March 14, 1867.

development, according as the appreciation of the propriety and necessity for the change enforces itself, not alone on the so-called educated classes, but upon the masses. Again, even supposing that this change should take place to the fullest extent, and should there be accorded to my chosen profession the position which I fondly anticipate for it, it does not follow that our physicians are to turn teachers, or that our teachers must have the special and technical training of a physician. They have failed entirely to appreciate the argument who take this narrow view of the case; they have wholly lost sight of the grander and more extended relations which have been constantly and expressly claimed as the function of the physician in this matter of *education in its broadest sense.*

Hitherto the medical profession has had but an indirect influence in education, but that influence, by the constant perfecting of their own studies, and the supplying of an essential knowledge, has undoubtedly contributed to the change which is now taking place in our educational systems. The state of things, to which they have thus indirectly contributed, now invites their direct guidance and control. It may be objected that the education demanded of the profession themselves in this country falls far short of the high requirements which have thus been set upon their office. Science and civilization it is said are advancing, and yet you demand but a little more culture in medicine than when its alliance with science had not been established. There is some truth in this objection, and it is deplorable that it should be true, as well as humiliating to make the confession. But this does not invalidate the force of the argument, which is based not on the *degree* but the *direction* of the culture. And besides, this is an evil which will rectify itself in due time. The exigencies which called for the establishment of medical schools in this country, allowed a very low degree of culture, and demanded very inferior qualifications on the part of the student. The influence of this state of things has been perpetuated, and is to-day evidenced in the manifestly-inadequate requirements for entrance into the profession.[1] Our thinking men have long been

[1] "The great evil of modern medical education," said the late Prof. Syme, in the concluding lecture of his course on Clinical Surgery, delivered

convinced of the necessity of reform, and this conviction is spreading over the minds of the entire profession; and it is no prophecy to assert that the day is not far distant when the standard of qualification must be raised and made to accord more closely with the important responsibilities of the office. The corrective must be applied in two ways: 1. By demanding a high scientific education before admitting the student to the study of medicine proper; and 2. By lengthening the time of that study, and taking up the separate branches in their natural and progressive order. The present system of medical teaching is more senseless even than superficial; but we may confidently expect, in view of the progressive spirit of the age, that we shall yet establish a more reasonable and adequate curriculum of medical studies.

With no disposition to "magnify mine office," but with a clear conviction of the necessary and inherent relations which must obtain between the studies of the physician and the coming education, the assertion is reiterated that it is his prerogative and his duty to take an important part in the movement. And, as between the clerical and the medical profession, for it is plainly here that the question lies, the latter must assume the place which has so long been occupied by the former. A great responsibility, then, rests upon the profession, and the young men who go forth from our institutions must be prepared to accept it, and they must find in this an addi-

at the Royal Infirmary of Edinburgh in 1867–'68, "is, that it has become a preparation not for discharging the duties of a profession, but merely for passing examinations which, for the most part, imply neither an accurate knowledge of facts nor the possession of sound principles, being simply affairs of memory loaded with dry terminology, to be thrown overboard at the earliest opportunity."

When so candid a confession as this comes from a representative man like Syme, and from a country where the requirements for entry into the profession are confessedly far higher than with us, we may well blush for the average standard of our own medical attainments. But my faith is firm and abiding that the time will come when this manifest evil will be corrected, and when it will no longer be possible, without fear of contradiction, to fling squarely in our faces such a bitter taunt—all the more bitter because true—as that uttered by Prof. Eliot, now President of Harvard, in his article on the new education, *Atlantic Monthly*, January and February, 1869.

tional incentive for carrying up their own culture to its highest completeness, a new motive for keeping constantly abreast the advancing waves of science and knowledge.

More than two centuries ago, Descartes, one of Europe's keenest thinkers, said: "If it be possible to perfect mankind, the means of doing so will be found in the medical sciences." With a far-reaching prescience, he anticipated the influence which these sciences, then in a crude, almost chaotic condition, would inevitably exert. We, to-day, have only to look around us, to see this influence manifested in a thousand different ways and directions. And, although we are yet far from perfection, and may never reach it, it cannot be denied that the influence of these sciences is tending toward that end, toward man's improvement, mental, moral, and physical—the most ennobling duty and privilege, perhaps, of the new education.

ART. II.—*The "Rubber Air-Cushion" in the Treatment of Complicated Fractures, and other Severe Injuries of the Lower Extremities, with Illustrative Cases.*[1] By L. D. MASON, M. D., Adjunct Surgeon to the Long Island College Hospital.

THE employment of "rubber air-goods or rubber water-goods," by the physician or surgeon, has been hitherto limited to the "water-bed," and the ordinary air-cushion for the nates. Neither the "rubber air-cushion" nor the "rubber water-cushion" has, as far as the writer is aware, been employed in the treatment of complicated fractures of the lower extremities.

Previous to preparing this paper, and while testing the value of the "air-cushion," the works of various authors on surgery were referred to, in order to see if any reference was made to its use in the class of injuries under consideration.

The following paragraph was found in the last edition of Gross's "System of Surgery." In treating of fractures of the thigh, he thus gives the "air-cushion" a passing notice: "The

[1] Read before the Long Island College Hospital Journal Association, October 4, 1870.

heel must be seen to; if neglected it will be sure to inflame and ulcerate, if not slough; too much care, therefore, cannot be taken to ward off pressure by filling up the hollow on each side of the tendo Achillis with cotton, or by employing, if necessary, a small air-bag or a bladder filled with water." All reference to the use of the "air-cushion" is limited to the above instance. The author seems not to have had any experience with the "air-cushion," in its application to injuries of the lower extremities, in the method which it is the object of this paper to illustrate.

The surgeon is called to see a person who has sustained a compound fracture of the leg, and the nature of the injury is such that he is warranted in an attempt to save the limb, or probably the condition of the person such as to render an operation inadmissible. In either case the approved treatment would be, to place the limb in a Barton's fracture-box, and surround it with bran, and prevent motion of the ends of the broken bones on each other, by suspending the box to a frame, lifting it an inch or so above the bed. A soft pillow might be used, and this is the usual resort until a Barton's box can be procured. But whether Barton's fracture-box or the soft pillow be used, neither is proof against the evil consequences of ununiform pressure.

The soft pillow becomes packed and hard; the bran in the fracture-box becomes infiltrated with the discharges from the wound, and, although readily removed above and around the sides of the limb, is apt to become sodden and sour directly underneath it, thus increasing the danger arising from this condition conjoined with pressure.

Barton's fracture-box is invaluable to the surgeon in the treatment of compound fractures of the lower extremities, but there are, no doubt, cases in which the surgeon lays the injured limb in its bed of bran, not without hesitation, and only because he has no better substitute; we regard the "rubber air-cushion" as such a substitute.

To more clearly demonstrate this, let me cite a case in point that occurred in one of the surgical wards of the Long Island College Hospital last spring:

John Hart, aged thirty-seven, a native of England, on the evening of the 19th of last March, while intoxicated, fell from the front platform of a street-car.

He sustained a compound comminuted fracture of both bones of the left leg just above the ankle-joint.

I saw him, in consultation with Dr. George K. Smith, about one P. M., two hours after the accident had occurred. The injury was as follows: Both bones were fractured just above the ankle-joint. The upper end of the fractured tibia protruded through an opening on the inside of the ankle, just above the malleolus. There was a wound, communicating with the fracture, on the anterior surface of the leg, at the junction of its middle and lower thirds; and one also on the outer side of the ankle-joint. Pulsation in the posterior tibial and dorsalis pedis arteries was good. The soft parts about the ankle and dorsum of foot were somewhat contused and the toes discolored. The whole foot below the seat of the injury was lower in temperature than the rest of the limb.

The patient, although partially intoxicated, readily comprehended that his condition was serious, nevertheless he strenuously opposed any operation.

The treatment was as follows: The wounds were thoroughly washed out with carbolized water—about the strength of one drachm to the pint—and then sealed with Lister's "carbolized putty." The limb was now placed in a fracture-box, being laid on and surrounded by oakum.

At the suggestion of Dr. Smith, cloths wrung out in hot water were constantly applied to the foot and lower half of the leg.

This treatment was carried on faithfully by relays of attendants night and day, for at least one week, at the end of which time the hot-water applications were discontinued, the vitality of the limb being insured. About this period extensive suppuration had loosened the putty-dressings, and they were entirely removed. The pus, having a good outlet, escaped freely. The limb was now thoroughly cleansed with carbolized water, then well dried, and placed in a fracture-box, bran being substituted for oakum, and carbolized oil for the putty-dressing. This treatment was continued until the twentieth day, when secondary hæmorrhage set in, probably from erosion of one of the tibial arteries. The hæmorrhage was readily controlled by pressure upon the femoral artery, made by the fingers of the house surgeon and assistants.

Prof. Hamilton (who had previously assumed control of the case) ligated the femoral artery, in Scarpa's space, in the presence of the class, two hours after the hæmorrhage had taken place. The ligation of the artery effectually controlled the hæmorrhage, which did not recur at any subsequent period during the treatment of the case. A short time preceding, but more especially following the deligation of the artery, great pain was experienced in the heel and ankle. As it was deemed important not to disturb the limb after the hæmorrhage, the leg was not removed from the fracture-

box until several days had elapsed. It was then found that the under surface of the limb lay on a mass of dark, sour bran.

That portion of the limb corresponding to the situation of the tendo Achillis was badly excoriated, and the tendon exposed about its centre. The os calcis protruded through an ulcer on the heel. Besides this condition of the posterior surface of the ankle, there was the original opening, through which the tibia protruded on the inner side of the ankle, and two fistulous openings on the anterior aspect of the ankle and its outer side. The dorsum of the foot was partially denuded of skin, the result of vesication, and the toes were swollen and tender.

In this cursory history of the case, so far, I have been particular in describing the condition of the ankle and foot, in order to show with what difficulties we had to contend.

The parts were now thoroughly cleansed, and the wound re-dressed with carbolized oil. The upper half of the leg not excoriated resting on a soft pillow, an effort was made to relieve the under surface of the ankle from pressure by suspending the foot and ankle by means of adhesive straps, but the attempt, after two or three trials, failed completely. In the failure of all ordinary means to accomplish this end, the idea of supporting the limb upon an "air-pillow" occurred to me, and I resolved to reduce it to practical use.

A four-gallon india-rubber gas-bag was forthwith procured from the chemical room of the college department, and I proceeded to apply it in the following manner: A soft pillow was folded upon itself and placed underneath the thigh; a piece of patent lint spread with simple cerate was placed upon the rubber bag and the injured ankle and foot laid on it—the bag being first sufficiently inflated so as to support the foot on a level with the upper portion of the leg. In order to insure steadiness, and prevent lateral rotation, oakum was packed around the bag, and the toes were allowed to rest in a loop of muslin, which was fastened to a wire cradle placed over the entire limb. The usual dressings were then applied.

From this time the ankle and the condition of the patient began to improve, granulations covered the exposed tendon, and in time a scale of bone was removed from the protruding os calcis, and granulations closed over the denuded portion of the bone; *all this while the limb resting directly upon the air-cushion.*

The patient is still confined to his bed, but his limb is comfortable. A small superficial ulcer is all that remains of the results of the extensive slough of the heel. He can raise the injured member from the cushion with ease. His general health is excellent. Exfoliation of bone is now going on, and he promises in time to recover, having a maimed and shortened, but still useful limb; or, should this promise not be realized, amputation can be performed without more than ordinary risks.

This is an exceptional case. No one but the vigorous, healthy man that this patient was, could have passed through

the six months of suffering, and drain on the system to which he was subjected. His recovery surprises all who saw him, or knew the previous history of his case.

We do not assume the position that the rubber cushion saved the life of this man, but we do believe it contributed greatly toward that end, at a period when amputation was inadmissible, and the question was not alone how to save the *limb*, but the *life*, of the patient.

The apparatus as improved is simple: it consists of an air-cushion made of india-rubber, in the shape of a small pillow, twenty-two or twenty-four inches in length, thirteen or fifteen inches wide, and, when fully inflated, eight inches high. In giving the order for such a cushion, the measurements (which are optional) should represent the cushion fully inflated. A flexible rubber tube, about two feet in length, inserted into the middle of the side of the cushion serves to inflate it. A screw-valve, in the extremity of the tube, regulates the admission or exit of air, which is supplied by the lungs of the surgeon or an attendant.

Before applying the cushion to the limb, cover it with a stout muslin slip or pillow-case, placing between the cushion and the muslin slip a layer of cotton-batting, a sheet of spongio piline, or some other material; in order to prevent the overheating and vesication that might arise, if the limb were allowed to rest directly upon a rubber surface, or with only a single slip of muslin intervening between it and the cushion.

The application of the cushion to the injured limb will depend somewhat on the condition of the patient, but more especially on the nature of the injury. In the case of a simple fracture of the tibia, or of both bones of the leg, in which severe contusions exclude the employment of ordinary splints, apply the cushion as follows:

The fractured bones having been placed in as normal a position as possible, an assistant keeping up proper extension, the limb is laid upon the partially-inflated cushion, which has been previously covered with a pillow-slip. The cushion is then permitted to rise well up, and over the sides of the limb, until its edges approximate to within one or two inches of each other. Firm, unpadded splints of pasteboard or other ma-

terial, adapted to the sides of the limb, are then placed outside of the cushion. An assistant, pressing the splints firmly, moulds the cushion to the limb. When this is accomplished, the whole apparatus is retained in position by a roller, or, by what is more convenient, three or four slips of muslin bandage. The pressure of the air-cushion or air-pad on the limb may be still further and more accurately adjusted by slightly inflating the cushion, or, if desired, by allowing a little air to escape through the rubber tube. If there be danger of the ends of the broken bones overriding each other, as is the case in oblique fractures, the limb should be properly strung to a frame placed over the bed.

In those cases in which uniform support of the limb is desired, without necessarily maintaining it in any particular position, simply lay the limb on the semi-inflated cushion, and adapt it to the limb by gradually exhausting or inflating the cushion in the manner already explained. A roller bandage or slips of muslin will keep the cushion in apposition with the limb. The bandage may be omitted if the patient is sensible and quiet, the limb retaining its position by its own weight.

The above manner of using the air-cushion is adapted to severe sprains or contusions, erysipelatous or other inflammations of lower extremities, extensive scalds, punctured or incised wounds of knee or ankle joints, and other similar injuries of the lower extremities, in which gentle and equable pressure is desirable, associated with fomentations or lotions, and in which irrigation may be sometimes employed with advantage.

In case irrigation be employed, the cushion might be slung, by means of three or four bandages, to a frame placed over the limb. Splints or the fracture-box is not necessarily required, as the rubber cushion is of sufficient stiffness to support itself. The cushion at the knee should be raised an inch or two higher than at the ankle, in order to facilitate drainage, the fluids being received into a pan placed at the foot of the bed. The water (medicated or not), used for the purpose of irrigation, may be distributed over the limb by a siphon of lamp-wick, or in some other way. The vessel containing the fluid used for irrigation may be fastened to the

frame (to which the limb is suspended), at a sufficient height to siphon off it contents readily.

In the case of a compound fracture, the limb is to be thoroughly cleansed and dried, the fractured bones being kept at rest by moderate extension, and counter-extension. The cushion is then covered with a pillow-case and partially inflated; the dressings, if any, that are to go beneath the lint, are laid upon it. The cushion is then placed in a fracture-box (the sides of the box being down), and the limb carefully supported is laid upon it, and permitted to sink into it until it receives proper support. The sides of the box are now put up and secured, and the cushion is gradually inflated or exhausted of air, until it adapts itself to the limb, snugly filling the space intervening between the latter and the sides of the box. Such dressings as are required are now placed over the anterior surface of the limb, and finally the box is properly slung in the usual way.

Due attention to drainage, and to the prevention of dissecting abscesses, may require that the box should be slung at a slight angle, in this way forming an inclined plane, and favoring drainage. In the above instance it will be necessary to dispense with the usual foot-piece that forms part of the fracture-box. The foot may be supported by a loop of muslin fastened to the sides of the box.

Proper attention to cleanliness may demand the changing of the pillow-case, at least every other day, especially if there is a profuse discharge from the wound. If this is not seen to, the soiled dressings, being allowed to remain underneath the lint, will soon be a source of irritation. This attention to the *under surface* of the limb is required, not only when the air-cushion is used, but in whatever form of dressing may be employed.

This latter method of applying the air-cushion has been used in a case of compound dislocation of the ankle-joint, which was received lately into one of the wards of the Long Island College Hospital.

The patient had previously been under the treatment of a physician at his own home, but, becoming unmanageable, he was sent to the hospital. He was admitted, suffering from severe delirium tremens, associated with

fracture of the fibula, rupture of the internal lateral ligaments of the ankle-joint, and consequent luxation of the tibia. The soft parts were badly contused, and, after a day or so, sloughed directly over the internal malleolus, thus constituting a compound dislocation. A probe could be easily passed between the articular surface of the tibia and astragalus.

With the concurrence of Dr. Burge, the attending surgeon, the limb was placed on the air-cushion in the method described, and suspended to a frame in the usual way. A few days' rest in this position greatly improved the appearance of the ankle. The tension of the parts was much less. The skin lost its glazed appearance, and was much less congested, notwithstanding the general condition of the patient was bad, his delirium having become the so-called "muttering delirium," and his symptoms having assumed a typhoid character. The patient has since died, but lived a sufficient length of time to test the advantages the rubber-cushion possesses over the other forms of dressings employed in the treatment of compound fractures of lower extremities. The drainage in this case was perfect, and the ankle was gently douched from time to time with proper disinfecting lotions, the fluids in every instance running into the dish placed for their reception at the foot of the bed.

It is important, in the treatment of injuries of the lower extremities, to perform occasionally passive motion at the knee-joint. With the dressings ordinarily used in the treatment of the class of injuries in which it is proposed to use the air-cushion, passive motion cannot be readily accomplished without more or less disturbance of the dressings, and much reluctance on the part of the patient. With the air-cushion passive motion may be made without disturbing the dressings in the least, and without touching the limb. In this manner, the thigh being already flexed at a convenient angle, by resting on the pillow already referred to when speaking of the application of the cushion to transverse and simple fractures of tibia, passive motion is accomplished by simply inflating the cushion, and then allowing the air to escape gradually. The thigh resting on the pillow is a fixed point, and by alternately depressing or elevating the leg—by exhausting or inflating the cushion—passive motion may be easily accomplished, and a change in the position of the leg readily effected, when it is desired to do so.

This method of making passive motion applies to the limb when the cushion rests directly on the bed. When the limb

is slung, passive motion is readily made at the knee-joint by lowering or raising the fracture-box.

The following are the conditions to which the air-cushion is particularly adapted :

1. Complicated fractures of the lower extremities in which amputation is inadmissible, and an effort to save the limb is warranted.

2. Cases in which the fracture is simple, but complicated with severe contusion, so that an ordinary splint would not be proper, at least for several days, and when a soft pillow is the usual resort.

3. Cases in which the limb is not fractured, but badly contused or inflamed, and in which irrigation might prove desirable.

4. After amputation, a properly-constructed air-cushion would afford a good rest for the stump, especially if the patient had to be transported. It would therefore constitute a valuable addition to the outfit of a field-ambulance, serving, as an elastic medium, to break the shock of travel over rough ground.

5. In brief, it is adapted to all cases in which *uniform support* of the limb is a desideratum.

In a few words, then, the advantages claimed for the air-cushion, over the usual methods employed in the treatment of complicated fractures, or other severe injuries of the lower extremities, are these : It is more cleanly, and the dressings can be changed with greater facility. Under certain conditions, in which, with the ordinary dressings commonly employed, passive motion could be accomplished only with difficulty, it affords an easy method of making passive motion. Owing to the readiness with which air can be admitted into, or allowed to escape from, the cushion, it can be very accurately adjusted to the limb, and pressure can be easily regulated from time to time *without removing* the dressings.

It is particularly adapted to cases in which it is desirable to use irrigation. And, finally, it fulfils a most important indication in the treatment of fractures and other severe injuries of lower extremities, by affording *uniform support* to all parts of the limb.

The principal objections made against the rubber air-cushion are these:

1. Tilting upward of the ends of the fractured bone, thus enhancing the danger of irregular union.

2. Difficulty in dressing the limb, especially its under surface.

3. Rubber being a poor conductor of caloric, danger of overheating the limb, and by confining the cutaneous perspiration inducing vesication.

The rubber air-cushion has been employed up to the present time in three severe cases: 1. A case of compound comminuted fracture of both bones of the leg, just above the ankle-joint. 2. A case of compound dislocation of tibia, at the ankle-joint. 3. At present, in a case of compound comminuted fracture of tibia, at junction of upper and middle thirds. In neither of the above cases, which are as difficult ones as could be selected to test the relative advantages of the rubber air-cushion, none of the above objections have held good.

The objection made with reference to vesication would hold good, were not the necessary precautions taken to prevent it, by allowing some material such as cotton-batting or spongio piline, in addition to the muslin slip, to intervene between the limb and cushion.

The writer has in this paper endeavored to place before the profession that which past experience has proved as so well adapted to afford *uniform support* to parts, and which his experience leads him to believe has not any disadvantage sufficient to justify its exclusion, from the by no means extensive resources of the surgeon, in the treatment of complicated fractures, and other severe injuries of the lower extremities.

The rubber air-cushion is manufactured by the "Goodyear India Rubber Glove Manufacturing Company," of New York, and can be obtained through the surgical instrument dealers.

Art. III.—*Dangerous Effects of a Hypodermic Injection; Extraordinary Slowness of Respiration; Recovery.* By Frederick D. Lente, M. D., New York.

Mrs. B., aged forty-nine, rather intemperate. Was called to her, April 17, 1870, and found her in an excited condition, and complaining of a severe "oppression" or pain, or some extremely distressing feeling at the epigastrium, difficult for her to describe. She said she could not lie down, as it interfered with her breathing; insisted on walking the floor, and at the same time having some one rub her back; in this way, she would, now and then, get rid of a little gas by eructation, but not with much relief. Had eaten very little through the day; pulse rather frequent; no abnormal chest-sounds. Bowels regular; had taken some castor-oil and brandy an hour or so before my arrival. I endeavored to persuade her to take an *emetic*, more for its relaxing effect on the stomach than to produce an evacuation of its contents. But she refused. Feeling that it would require several hours to act on the disease by anodynes administered in the ordinary way, and knowing that my former partner, Dr. Barker, had relieved her of a somewhat similar attack by the hypodermic injection of morphia, I injected two-thirds of a grain. After waiting twenty minutes, and finding no indication of any effect, I gave one-third of a grain in the same manner. For ten minutes longer she continued to walk the floor, apparently uninfluenced by the anodyne; then she was induced, after much persuasion, to get into bed, and sat up for a time, complaining bitterly of the distress; when, suddenly, she fell back on the pillow, with her mouth open, and with a succession of spasmodic jerks of the muscles of the back. She answered a question a moment after feebly, and then lapsed into complete insensibility. Pulse at this time 120, strong and regular; respiration soon became infrequent, and the pulse proportionately more frequent; pupils fixed, and but slightly contracted; a natural heat over the whole surface. Within half an hour from this time the respiration had fallen to seven in two minutes, three and a half to the minute, but not at all stertorous; pulse 120, fair strength. Watched her closely for half an hour longer, doing nothing, as the pulse gave no evidence of danger; when, suddenly, respiration threatened to cease altogether. I then injected one-sixtieth of a grain of atropia hypodermically, and, after waiting twenty minutes, and finding no improvement, I repeated the dose. Still no change took place, the pupils remaining *fixed* at full a line in diameter. I now summoned Dr. Murdock to my assistance, as artificial respiration and other means of relief appeared necessary. About this time respiration again threatened to cease, there being an interval of half a minute, by the watch, between the inspirations, but the *average* remained constantly at *three and a half* per minute. The pulse gradually rose to 150, and, at one time, to near 160, but, except at the two periods when death seemed imminent, maintained its volume and strength. The tongue soon became dry and brown, the surface moderately

livid. For an hour and a half she frequently opened her eyelids, especially when a cloth, wet with ice-water, was applied to the head, which was frequently done, but not when loudly addressed, the balls remaining fixed, and turned upward. Rapid friction of the chest seemed to have some influence on the respiration, and color of the surface. At times, the respiration was slightly "sighing," but generally natural in inspiration and expiration, except that the latter was rather prolonged. I attempted to give a stimulating enema, but found the sphincter ani so completely relaxed as to render it impossible, the *rectum* feeling precisely like the *vagina*. About the time of Dr. Murdock's arrival, however, I found it slightly contracting, and injected an ounce of brandy diluted, and holding in solution twenty grains of *caffeine;* also got a battery in working order, but had no occasion to use it. Finding the respiration still at three and a half per minute, and the symptoms occasionally becoming threatening, we injected brandy into the stomach through a long, flexible catheter, introduced through the mouth; although the end did not reach within three inches of the stomach, the injection passed easily (for some reason, the instrument could not be made to pass into the pharynx through the nose, which has been recommended as preferable to the mouth). The stimulants did not, however, seem to have any effect, good or bad. Finally, I applied a cloth, wet with Granville's lotion, to the chest. This vesicated within a few minutes, and the respiration rose to four and a half, continued so for half an hour, then rose to six, which it did not attain until near three hours and a half from the inception of the alarming symptoms. As the respiration increased in frequency, the pulse diminished. An injection of egg-nogg was now given *per rectum*. About this time, a profuse perspiration suddenly covered the surface, and for a few minutes only the pupils became more contracted, but still insensible to light. At about 4.30 A. M., six and a half hours from the beginning of the attack, the respiration had risen to seven, and the pulse had fallen to 120; and, upon addressing her loudly, she opened her eyes, and, on attempting to give a teaspoonful of brandy-and-water, she vomited a dark fluid, and soon after made a feeble attempt to speak. Two hours after this (having left the house in the mean time), I returned and found her fully conscious, and very nearly in the condition in which I found her at my first visit—restless, the same sensation at the epigastrium, with the addition of vomiting, insisting on getting out of bed, etc. She rose with some assistance, and had a considerable evacuation from bowels and bladder. Pulse 100, skin merely moist, pupils about the same, but now sensitive to the stimulus of light.

April 19th (evening, forty-eight hours from the attack).—Has vomited every thing which she has taken, and has passed all the nutritive enemata which have been given, notwithstanding various anti-emetic remedies. Pulse good. Complains of "soreness all over;" no disposition to sleep.

April 26th.—The unpleasant symptoms very gradually subsided, and she is now fully convalescent. She was sleepless for several nights.

Remarks.—The above case is given in full, and at considerable length, because it includes several interesting points deserving attention, not the least important of which is that which indicates the necessity for caution in the administration of hypodermic injections of *morphia;* and I feel the more impelled to draw attention to this, on account of the recent publication of a letter of mine to a distinguished member of the profession,[1] highly eulogistic of this method of medication. Not that I feel disposed to take back one word already uttered in its favor, but, as the use of the anæsthetic power of chloroform may, if persisted in, materially restrict the employment of anæsthesia in medical and surgical practice; so, the rash or indiscriminate use of the hypodermic method may unduly circumscribe the application of a medical discovery which should be considered as second only to that of anæsthesia. The patient was in such a peculiar nervous condition, that it was impossible to ascertain whether the distress, of which she complained, was actual pain, or oppression from regurgitant bile, aided by a certain amount of hysteria. It is evident, from the manner in which the injection acted, that there was no very intense pain, for the amount given was not more than sufficient to neutralize intense pain, considering the delay between the doses. When there is severe pain, as from neuralgia, choleraic cramps, uterine irritation, etc., less than a grain will rarely quell it completely, though it is customary to divide the dose, unless a previous use of the full dose, in the case of the same patient, has indicated its safety. In ordinary *cephalalgia*, however, even though very intense, a much smaller dose often gives complete relief. The nervous excitement and the constant locomotion, which the patient insisted on keeping up, as the only relief, doubtless tended to delay the action of the narcotic, but it is rare that a large dose of morphia, hypodermically administered, does not manifest its power in some degree within fifteen minutes. The moment the nervous excitement was overpowered by the medicine, there being probably no severe degree of actual pain to neutralize, the patient *instantly* fell back in a state of stupor; hence the caution necessary in cases of *delirium tremens*, or mania, or violent excitement of any

[1] Prof. G. T. Elliot, M. D., in April number of this Journal.

kind existing without pain, or complicating painful affections.

The absence of any considerable contraction of the pupil, the most constant symptom of opium-poisoning, is remarkable; and also the additional fact that the thirtieth of a grain (Nichols's extract) of atropia, a quantity usually considered amply sufficient to neutralize a grain of morphia, aided by the caffeine, had no appreciable effect whatever, either on the pupils or the general symptoms. A larger quantity of atropia was not ventured upon because, in a noted case recently reported in Philadelphia, it was the opinion of Dr. Gross that this drug decidedly increased the narcotism. The extreme infrequency of the inspirations, and continuing for so long a period, is considered very rare, if not unique.

The rate of the *pulse* varies very much in different cases of opium-poisoning, but a frequency of 150 and upward, in cases of recovery, is not common. The absence of the profuse sweating, which almost always attends the action of opium, even in full, not toxicological doses, is worth noting. It did occur, only for a few minutes, just as the patient showed signs of returning consciousness. The rather abrupt and complete disappearance of such formidable symptoms, immediately succeeded by the symptoms noted at the inception of the attack, is a feature not usually observed in cases of narcotic poisoning. Finally, the complete recovery of the patient, without the use of any extraordinary means, is remarkable and instructive.

It is possible that the atropine or the caffeine, or both together, might have had some influence on the result, or might, at least, have modified the symptoms usually attendant on opium-poisoning, but there was no evidence of this. It is probable, but not certain, that the stimulant had some influence in sustaining vitality. It is worth noting that, with the respiration in such a precarious condition, a tube could be introduced with facility, by the mouth, into the œsophagus, and brandy injected into the latter at some distance from its lower extremity, without interfering with the respiration in any degree. (The advice to introduce, in such cases, through the nasal passage, judging from the trial in this case, I do not consider necessary or judicious.) The effect of the rapid vesica-

tion of the chest, produced by the lotion, evidently did produce a decided effect: the inspirations immediately rose from three and a half to four and a half, and then very gradually to six, and the hue of the skin was permanently improved.

In extreme threatening cases of opium-poisoning, it is customary to resort to very active and energetic measures, such as rousing the patient by flagellation, or locomotion, artificial respiration, the galvanic battery, etc. A battery was ready on the table, and the moment when artificial respiration seemed to be imperatively demanded was watched for. But, so long as the pulse, though frequent, maintained a fair degree of force, and the blood, though dark, maintained a fair degree of aëration, except at brief intervals, it was concluded that as perfect quiescence of the patient as possible, under the circumstances, would give her the best chance, and that, with such a remarkable condition of the respiration, any considerable disturbance of the system might precipitate a disastrous result. It is probable that patients, under these circumstances, are sometimes lost from the *nimia diligentia curæ*.

ART. IV.—*Relation of Hæmoptysis to Phthisis.* By E. HOLDEN, M. D., Newark, N. J.

APPROPRIATE to the extracts in the October number of this JOURNAL, which present in interesting contrast the views of Profs. Niemeyer and Skoda, I beg to submit a few facts that may be of interest. They are drawn from a large mass of material bearing upon the general subject of "Phthisis, Prospective and Probable," which will, at some future time, be laid before the profession.

The conclusions toward which they lead are corroborative of the first postulate, quoted from the article of Niemeyer, viz., that "most, though not all, patients who suffer from capillary, bronchial, or parenchymatous hæmorrhage of the lungs, are either already phthisical or become so later."

The difficulty of collecting reliable information of a statistical character in regard to those who have suffered from pri-

mary or initiative hæmoptysis is very great, and made so chiefly by a perfectly natural weakness of human nature.

The man or woman who, for the first time, notices the tinged expectoration, or recognizes with an alarmed thrill the peculiar taste of pure blood from the throat, realizes at once that he has "raised blood," and may be already a marked victim, but in a week or a month the hæmoptysis was simply a little blood from the teeth or stomach; in six months a rusty expectoration; and in a year, or at most two, if a hæmorrhage more profuse has not supervened, it is denied or really forgotten.

Every one to any extent familiar with phthisical patients, has probably noticed this singular tendency to believe what is wished to be true, and even had difficulty in extorting the facts where the necessity for a prognosis demanded it.

This peculiarity has, moreover, been fostered by the diversity of modern opinions, not only in relation to hæmoptysis, but to tuberculosis in general.

This, however, is not the occasion to descant upon the views of writers, or to dilate upon the almost inextricable confusion in the pathology of tubercle which has been brought about by the talented observers of the present day; but it cannot be denied that the growing tendency is toward doubt in the existence of tubercle as an entity, and to cause the initiative symptoms to be regarded with less apprehension.

The admirable researches of Southey on the nature and affinities of this mysterious precursor of death contain, however, one point pertinent to the present subject; since, if the initiative point of election of the disease be either between the coats of the capillaries of the alveoli, or in the connective tissue immediately adjacent, hæmoptysis may well be regarded as significant of a future phthisis.

That the complicating question of hereditary influence may be as far as possible eliminated, only those persons are included in the following table who were presumably free from family leanings toward phthisis. In no case had more than one member of the family died of, or suffered from, the disease, and in but very few had *any* member so suffered.

Fifty-five also, being under thirty years of age, and without

information in regard to family tendencies, are for the same reason not included.

The average number of years during which parties have been under observation has been between nine and ten, and they are divided into classes for convenience.

The whole number collected who had raised blood in appreciable quantity, including all who had expectorated the same with sputa, whether they deemed best to style the fact "hæmatemesis," "hæmoptysis," "the rusty sputa of a subacute pneumonia," "a little touch of blood from the throat or gums," or whatever palliating cognomen besides, has been *one hundred and fifteen* adults.

Of these, 37 were between 30 and 35; 31 between 35 and 40; 22 between 40 and 45; 10 between 45 and 50; and 15 between 50 and 60.

Of the whole number, sixty-two, or more than one-half, passed from under observation and have not been heard from. Nineteen have died, and eleven of these of consumption. This large percentage of deaths would of itself seem to indicate some inherent weakness of constitution, whatever the ultimate cause of decease; and, in reference to the death from phthisis within so short a period as ten years, if we allow even one-half as unfavorable a record for the sixty-two not heard from (and there is no reason for not ascribing the same rate of mortality to them), we have a startling commentary on the assertion that the raising of blood from the throat is a forerunner of consumption, for the conclusion may be thus briefly stated:

Of one hundred and fifteen adult persons who, with no hereditary tendency to consumption, had yet experienced hæmoptysis, from twenty-five to thirty-three per cent. died of phthisis within ten years.

ART. V.—*A Case of Partial Placenta Prævia. Novel Mode of controlling Hæmorrhage.* By J. H. HOBART BURGE, M. D., Surgeon to Long Island College Hospital, President Kings County Medical Society, etc., etc.

JUNE 16, 1870, Mrs. D. summoned me in haste, the messenger announcing the fact that she had lost a quart of blood.

I found her sitting up and quite comfortable. She said she ought to have three weeks yet before confinement, but, though she had had no pain whatever, she felt that labor would not be deferred many hours. She had lost more than a pint of blood on two previous occasions during this gestation, and the present hæmorrhage was much larger. I told her she must lie down immediately, and not rise again until she was delivered. I found, as I expected, a margin of the placenta presenting. The liquor amnii had so completely drained off that the outlines of the child were easily recognizable through the abdominal walls. The examination excited some pain, and immediately hæmorrhage recurred. I observed that during the pain the pressure of the child's head upon the placental edge completely controlled the hæmorrhage, and that the moment relaxation took place the flow commenced. Taking advantage of this indication, I grasped the uterine tumor and pressed steadily in the direction of the os. This I continued with perfect success for two and a half hours, when a living child was born, and the placenta followed without interval of time.

During all this period, if I relaxed my pressure when the uterus was not in a state of contraction, hæmorrhage was sure to commence immediately. In a prize essay written by Prof. James D. Trask, and communicated to the American Medical Association, fifteen years ago, I find the following sentence: "Rupture of the membranes by permitting the escape of the liquor amnii, and allowing the direct pressure of the presenting part against the placenta, is, for the most part, sufficient to restrain hæmorrhage in partial presentations, but usually proves insufficient when the presentation is complete."

I learn from the same source that Mauriceau, as early as 1682, introduced the practice of rupturing the membranes in cases of partial placenta prævia, whenever it was possible to do it, "with the hope of securing increased contractions of the womb."

Dewees and Baudelocque both opposed it, "because of the difficulty of its performance and the risk of increasing the hæmorrhage by separation of the placenta." Besides, they asserted that it very seldom stopped the hæmorrhage, and the draining off of the liquor amnii was a serious source of embar-

rassment in case version became necessary. In my case, the membranes were already ruptured, so that I had no responsibility in the matter, but whether ruptured spontaneously or designedly, I find nowhere any recommendation of the practice which I instituted and found so efficient. If it is new, I am glad to contribute it as an additional means of success in a class of cases always sufficiently grave. If it is old, those who are greater readers in this department will soon advise me of the fact.

ART. VI.—*Report of Three Cases of Poisoning by Whiskey in Children, with Remarks on Alcoholism.*[1] By P. DE MARMON, M. D., King's Bridge, N. Y.

IF sudden death from the effect of alcohol is very rare in habitual drunkards, the same cannot be said of those who are not in the habit of drinking spirituous liquors; and where the first may take alcohol in large quantities without any immediate danger, the latter, on the contrary, may be poisoned by a small quantity of it. It is impossible to say what quantity is necessary to produce death in an adult, it depends in a great measure upon the idiosyncrasy of the subject; sometimes one pint of brandy has been sufficient to cause death; some women in pregnancy have taken at a single draught over that quantity without being injured by it; but every one knows how little it takes to intoxicate a child.

Within a year I have seen three cases of poisoning by alcohol in children, and of those three cases two died.

CASE I.—Philip A., aged five years, a healthy and strong child, born of Irish parents, took on a Sunday morning, at 6 o'clock, a tumblerful of whiskey. As I was absent the whole day, I did not see the child until 9 o'clock in the evening. He was then in a completely comatose state, respiration stertorous and 82 in a minute; pulse full, very irregular, but rather slow; temperature taken in the axilla 93½° F.; the room in which he lay was about ten feet square, and contained as many adults as it could uncomfortably hold, say eight or ten. I politely advised the majority of them to evacuate the premises, before beginning an examination of the patient. This child had had involuntary stools and micturition, which, added to the

[1] This paper was read at a meeting of the New York Medical Journal Association, February 18, 1870.

vital signs, indicated great danger. He was perfectly insensible, and had some clonic convulsions. I prescribed warm applications all over the body, and liquor ammoniæ acetatis to be given in doses of half an ounce every hour, but I must say without much hope, for the whole of the symptoms, and the long time elapsed since the absorption of the whiskey, indicated that death was unavoidable. My prognosis was unfortunately confirmed four hours after, viz., nineteen hours after the ingestion of the fatal drink. No *post mortem* could be obtained.

Case II.—Sarah F., a little girl, five years old, took on Saturday afternoon, at 4 o'clock, a tumblerful of whiskey-and-beer, given to her by a lad about fifteen years old. I saw her at half-past six o'clock, that is to say, two and a half hours after the ingestion of the liquid.

She is a strong-looking, healthy child of Irish and sober parents; my attention, on entering the room, where she was lying on a sofa, was first called to the manner in which she was breathing—she was almost suffocating; this the mother told me was her usual method of breathing, though not so bad; it was due to an intense hypertrophy of the tonsils. There was hyperæsthesia of the skin, principally of the lower extremities, which were cold, and anæsthesia of the cornea, which was glassy; respiration stertorous; if it had not been for the odor of the liquor exhaled, it would almost have been impossible not to think it was a case of cerebral hæmorrhage or of asphyxia. Temperature in the axilla 94° F.; pulse 60; respiration 80; the finger introduced in the mouth beyond the pharynx produced no sensation; she had involuntarily soiled her bed, and she vomited a couple of times about an hour after taking the drink.

I ordered the child to be kept warm, and every half hour a tablespoonful of liq. ammon. acet. to be administered.

I saw the child again three hours later, but found very little change, except that the temperature was one-half degree higher. The medicine had been given in much smaller doses than I ordered, under the pretext that the child could not swallow; I then took a syringe, and gave the patient an enema with about two ounces of the remedy; the father of the child was at my house the next morning at 7 o'clock, and declared that the child was all right.

Case III.—Rob. X., a boy eight years old, of Irish parents, father and mother both regular inebriates, took some whiskey at 8 o'clock on Friday morning, the quantity of which could not be ascertained, still less the quality, inasmuch as the child's parents were both drunk, and denied that the boy had taken any thing; some charitable neighbors, however, took upon themselves to send for a physician at about 12 o'clock. I was absent on business at the time; my friend and neighbor, Dr. Varian, was also away. I was, however, able to see the patient at 2.30 P. M. (six and a half hours after the ingestion of the liquid), but found a doctor from the vicinity in charge of the patient. The doctor had been administering to the child a strong solution of mustard in water, and was then in the act of tickling the

child's throat with a quill, to provoke emesis. I could not, as I would have wished, examine the vital signs in that case, which were very interesting to me, the attending physician requiring no further advice, though, as he acknowledged afterward, he had never seen a case of that kind before. The patient died on Saturday morning at 5 o'clock, twenty-one hours after the ingestion of the drug. On the next day, Sunday at 12 M., I was summoned by the coroner to make a *post-mortem* examination of the subject.

Autopsy, thirty-one hours after death.—Body thin, icteric; rigor mortis well marked in the lower limbs, but none in the arms nor in the neck, the head rolling about as if it had been dislocated in its cervical articulation. The lungs were thoroughly congested, of a dark-purple color, and contained a large quantity of black blood, which could be pressed out, as if from a sponge, after cutting through the texture of the organ. The internal membrane of the bronchus was livid and coated with bloody, spumous mucosities; the pericardium contained about half an ounce of serum. The right ventricle of the heart was much distended with dark blood, and had black clots; the left ventricle was empty; the blood had a smell of whiskey. The liver was congested, of a pale-yellowish color, and the gall-bladder less than half full. In cutting through the œsophagus a thick yellow fluid escaped from the stomach, which I at first took for pus, but which after examination I found to be mustard. The mucous membrane of the stomach was soft and red, principally toward the cardia and the great curvature, where it was inflamed and punctated. This was probably caused by the action of the mustard, the child being in a left decubitus during its administration, and *diluted* alcohol never producing local inflammation of mucous membrane; the kidneys were also congested; the bladder contained very little urine. The bowels were empty.

The head was not examined, for want of time; but, according to all probabilities, the brain must also have been congested, as it has always been found where death is caused by neurosthenic poisons, and particularly by alcohol.

We have here three cases of acute alcoholism in children, of whom two died, in a small neighborhood, and within one year. I do not count a fourth case of a boy about twelve years old, whom I picked up on the side of the Bloomingdale road last August, and whom I unsuspectingly brought to his home thinking he had been sunstruck. This boy was only drunk and quite insensible; and should this have happened to him in cold weather, he would probably have died, for every one knows what a depressing action cold has upon intoxicated subjects.

Alcohol diminishes the circulation, and its ingestion is followed by a decrease in the activity of the organs, from the slow

circulation of the blood; it is demonstrated in Cases I. and III., where it is seen that both temperature and pulse were much below the normal rates, while respiration was much increased. This anomaly may be accounted for by the irritation caused upon the pneumogastric nerve, which is affected by alcohol, as I have noticed in my experiments upon frogs. If, then, alcohol diminishes the circulation, by thickening the blood, and of course retarding elimination by it, a remedy which will increase the circulation and fluidify the blood is indicated. M. Claude Bernard says: "If nitrate of potassa accelerates the circulation, is it astonishing that it should be a diuretic? The kidneys separate the urine from the blood which goes through them; if, in a given time, a larger quantity of blood passes through them, they will separate more urine. . . .

"Alcohol retards the circulation, therefore its ingestion must be followed by a decrease in the activity of the organs, from the retardation in the passage of the blood. Drunkenness is nothing else. How must we combat drunkenness? By giving back to the circulation the activity it has lost. Acetate of ammonia ought, then, to be a perfect remedy against acute alcoholism. It is, in fact, what takes place."

This theory is confirmed by experience; thus in Case III. we see a congestion of all the organs, distention, embolism of the heart, as shown by the hard clots contained in its right cavity, and forming thus an obstacle to the circulation.

Alcohol coagulates and precipitates fibrine and albumen; the blood contains some small granulations, which remain on the filter (Lancereaux), the fibrine is shorter; its detritus may form some nucleus of embolia, obstruct the capillaries of the lungs, and thus cause the highly-congested condition of these organs.

The presence of clots in the blood has also been ascertained. Petit said that alcohol, injected in the veins, coagulates blood and causes death. In one of Orfila's experiments, the right heart contained a few gelatinous clots. Gasté has noticed the presence of fibrinous clots. Mr. Tardieu saw once (Case VII.) some soft clots in the right heart. Casper (Obs., 219) remarks that the right heart, and notably the auricle, was filled with dark and coagulated blood. We have

observed this coagulation of the blood in autopsies and experiments. On three rabbits drowned in alcohol, a clot was filling each half of the heart, and extended to the large vessels. In two autopsies of individuals dead from the effects of drunkenness, we have seen reddish and blackish clots in the right half of the heart, and once at the same time in the left ventricle. The right ventricle is most frequently the seat of these diffluent concretions. In some cases, even where drunkenness was combined with modes of death apt to fluidify the blood, we have seen these exceptional clots. A man leaves a tavern to go and hang himself; the right ventricle contains a rather large coagulum. In a drowned subject whose stomach and blood contained Kirschwasser, a few dark clots were found in the right heart; in two others, dead from the same cause, while drunk, the blood was clotted in the right side in the first one, and in the second it was mixed with dark clots in both sides of the heart. A phthisical person dies suddenly after drinking three pints of claret wine; the blood contained alcohol; discolored clots existed in both halves of the heart. If death is very sudden, notwithstanding the presence of alcohol, the blood may have a different color in the two sides of the heart; we found it redder in the left side in a drowned man and in one who hung himself, both while drunk.[1]

Before making any further remarks upon alcoholism, I must here draw a few conclusions regarding the acute cases of poisoning above cited:

1. When called to see a case of poisoning by alcohol, care must be taken, if but a short time has elapsed after the ingestion of the liquid, and none has been vomited, to give an emetic immediately. I prefer brown emetine to any other, inasmuch as, in a dose of from two to four grains for an adult, it produces emesis almost immediately without nausea.

2. Keep the patient warm, and not, as some persons do, take him out of doors under the pretext that fresh air will do him good; it is a very great mistake, as a man who is only half intoxicated in a warm room may become quite drunk by going out in the cold air.

[1] Dict. Encycl. des Sciences Méd., vol. ii.

3. Give liquor ammoniæ acetatis, in large and repeated doses, to fluidify the blood and reëstablish the circulation.

4. When the patient is not seen until a long time, say, from two to six or eight hours after the alcohol has been taken, the comatose state, the stertorous respiration, the decrease of the pulse, cold temperature, and accelerated respiration, are noticed; it is then probable, if the patient has not vomited, that the greatest part of the liquid taken may have been absorbed. In this case, warm applications, and liquor ammoniæ acetatis in large and repeated doses must be given immediately, an emetic being of no use, for several reasons: 1. Because in such bad cases, and after such a lapse of time, the stomach, œsophagus, and pharynx, are almost always paralyzed, and the emetic can have no effect; 2. Because, being usually given in larger doses for the purpose of producing emesis, it only adds to the severity of the case. I should say the same of all mechanical means used for irritating the pharynx and larynx, with the view of producing emesis, inasmuch as these parts are, as I have already said, paralyzed—the stomach-pump being, if supposed necessary, the only available means.

Here terminate the observations I desire to make upon acute poisoning by alcohol, as they were suggested to me from the three cases above cited. Such cases cannot be too well known, as being terrible examples—they may be useful to people as a warning to keep alcoholic drinks as well as other poisons out of the reach of children.

REMARKS ON ALCOHOLISM.

History.—Much has been said, I know, about alcoholism, but not enough yet about this vice, to which man alone of all the animal creation is addicted. Although the name is of recent date, the abuse of spirituous liquors is almost as old as the world itself. The Indians[1] and the Chinese have used spirituous liquors from very remote ages; they practised the art of distillation a long time before other nations.[2]

From the most remote time, the use of intoxicating liquors

[1] L. F. Maury, Croyances de l'Antiquité.

[2] Morehead, On Ebriating Liquors, page 107, in R. Baird's History of Temperance Societies.

attracted the attention of legislators. In Lacedæmon, Lycurgus, according to Plutarch, intoxicated slaves, in order to inspire the people with disgust of drunkenness. In Athens, drunkards were sentenced to death by Draco.

If we consult the works of ancient medicine, we find scarcely any mention of alcoholism; by contrast, however, this disease is noticed by poets and prose-writers, and notably by Nero's preceptor, who was well situated for this sort of observation: "Inde pallor, et nervorum vino madentium tremor, et miserabilior ex eruditatibus quam ex fame macies; inde incerti labutium pedes, et semper, qualis in ipsa ebrietate, titubatio; inde in totam cutem humor admissus, distentusque venter, dum male assuescit plus capere quam poterat; inde suffusio luridæ bilis et decolor vultus, tabesque in se putrescentium et retorridi digiti articulis obrigescentibus, nervorumque sine sensu jacentium torpor, aut palpitatio sine intermissione vibrantium. Quid capitis vertigines dicam? Quid oculorum auriumque tormenta, et cerebri exæstuantis vermusationes?" Trembling, anæsthesia, vertigo, tinkling of the ear, delirium, dyspepsia, icterus, ascites, anasarca, cachexia—such are, in a few words, the principal accidents of alcoholism.

It is said that, in Arabia, Mohammed found the abuse of drunkenness so common that he was compelled to totally proscribe the use of wine. In France, Charlemagne forbade provocation to drinking, and since this emperor several edicts relative to fermented beverages have been published; but, for the most part, they were badly executed. Wine, beer, cider, and a few other intoxicating liquors made by the fermentation of the juice of a small number of plants, were at that time the only liquors known. It was only in the eleventh century that a new liquor was obtained from the distillation of wine; originally manufactured by the Arabs, the name of *alcohol* was given to it, and it was first looked upon as a poison; later, as a remedy (*aqua vitæ*); and, in the sixteenth century, as a panacea. It was at a very early date given to men employed to work in the mines in Hungary; in 1581 the English soldiers received some as a cordial during the war in Wales (*Camden*, *Annals*, 1581). In France especially the use of that liquor

[1] Sénèque, epist. 95, § 16.

spread. In 1514, Louis XII. granted to vinegar-makers the privilege of distilling brandy, and from 1678 their sale, instead of being, as before, confined to druggists, was made publicly in the streets. Thus, very soon, the evil results of this pernicious drink laid hold upon all classes of people.

In the eighteenth century the abuse of brandy increased; but it was principally in the north of Europe that this beverage made the most extensive ravages. It was ascertained that in 1764, in St. Petersburg, six hundred and thirty-five individuals were killed by the use of brandy. In Sweden, the privilege established by Gustavus III. for the sale of these liquors, toward 1783 developed to such a degree the vice of drunkenness, that it was necessary to abolish this branch of fiscal income. Beer was the ordinary drink of the working-classes in England until the reign of William and Mary; but the use of spirituous liquors was introduced by an act of Parliament, for the encouragement of distillation, in 1744, and from this time brandy was sold in all the shops of the capital. The phyiscians at this time remarked that many persons died victims of this abuse, and a law was passed to prohibit it. It was, however, not until 1751 that the steps taken by the government succeeded in bringing back the consumption of beer to the same ratio as before.

The introduction of spirituous liquors in the United States dates from the time of the first establishment of English colonies in this country, but for a long time their consumption was very limited. The fatal mistake that they are useful to the healthy man was spread among the people during the Revolution. In this great struggle a ration of spirituous liquors was daily distributed to the soldiers, to help them in bearing the fatigues of the war, but a certain number of them contracted the fatal passion of drinking, and thus contributed to spread that vice in society.

The consumption of spirituous liquors in this country in 1828 was 81,782,242 gallons for the whole United States (it was at that time that temperance societies began to spread; the first being organized in 1823). The population of the United States was then about twelve million inhabitants; which would give over twenty quarts per annum for each in-

dividual. Thus, it is proved that at that time there were in the United States over 300,000 drunkards, and that the number of deaths caused every year by the abuse of spirituous liquors was over 30,000 (R. Baird). In 1842 Dr. Samuel Forry [1] counted in the army of the Northern States 1,370 cases of ebriation, of which five were terminated by death; and in the army of the Southern States 2,616, of which fifty-eight died. *Delirium tremens* was noted in 408 cases.

Mr. Everett says, in his report of the last census (1860): "For the last ten years the use of spirits has: 1. Imposed on the nation a direct expense of $600,000,000; 2. Has caused an indirect expense of $600,000,000; 3. Has destroyed 300,000 lives; 4. Has sent 100,000 children to the poor-houses; 5. Has committed at least 150,000 people into prisons and work-houses; 6. Has made at least 1,000 insane; 7. Has incited to the perpetration of at least 1,500 murders; 8. Has determined at least 2,000 suicides; 9. Has caused the loss, by fire or violence, of at least $10,000,000 worth of property; 10. Has made 200,000 widows and 1,000,000 orphans."

We shall know, as soon as the results of the present census are published, the difference in the consumption of alcoholic liquors for the last ten years, with the period alluded to in Everett's report.

But in the mean time we can learn the increase of consumption of liquors in the United States as reported recently by Commissioner Wells: "The retail sales of liquors amounted in one year in the United States to $1,483,491,865; of this amount New York alone is in for $246,617,520; Pennsylvania, $152,-603,495; Ohio, $151,734,875; and Illinois, $119,033,945." "When," says Dr. John Bell, "to this enormous amount of nearly fifteen hundred million dollars, is added the value of the time wasted in the consumption of ardent spirits and of the property destroyed by intoxicated persons, we can readily credit the assertion that the savings from the disuse of alcoholic drinks would extinguish the public debt in one year."

Now, leaving aside political economy, and looking into the moral and physical evils to which man is subjected from the effects of alcohol, we find the following statistics:

[1] American Journal of Medical Sciences, 1842, April and July.

The returns for a period of twenty-eight years show in the Pennsylvania Hospital for the Insane 389 cases of insanity from intemperance during this period; of whom 357 were males and 32 females; being collectively in the proportion of nearly 14 (13.9) per cent. of the 5,315 patients insane from all causes.[1]

Bayle attributes to the abuse of ardent liquors one-third of the mental diseases he has observed; out of 1,079 insane admitted at Bicêtre from 1808 to 1813, he finds 126 cases caused by the habit of drinking; out of 264 cases of insanity observed in the "Salpétrière" in women, 26 were caused, according to Esquirol, by the abuse of wine. Casper[2] tells us that one-third of the insanity in the lower classes is caused by the use of brandy. In a census of 12,007 cases of insanity made in England, 1,799, or nearly one-fifth, were caused by intemperance. MM. Deboutville and Parchappe, for the period included between the 11th of July, 1825, and the 31st of December, 1843—eighteen years—found 28 per cent. Morel counts 200 patients out of 1,000 in whom mental affections were owing to the same cause. Out of 1,595 cases observed at Mareville, 115 were found to have been inebriates (Motet).

The above statistics show the frequency of alcoholic mania; the following will show its progress: from 1826 to 1835, 1,557 inmates in the Charenton Insane Asylum[3] gave 134 cases caused by the abuse of ardent spirits, i. e., 8 per cent. In the same asylum, from 1857 to 1864, 1,146 patients were admitted, out of which 277, or 24 per cent., were drunkards; at Bicêtre M. Contesse found 1,000 cases of alcoholism out of 5,238 cases of insanity. From 1855 to 1862 the same author has been able to observe that the proportion of inebriates increased in a surprising manner, namely, from 12.78 per cent. to 25.24 per cent.

[1] The last report of the Lunatic Asylum at Northampton, Mass., for 1870, shows that, out of eighty-four male patients admitted in 1869, twenty-one, or 25 per cent., are credited to intemperance, and it is to be remarked that, out of the twenty-three sundry causes accounted for in the report, this last presents the largest figure.

[2] Beiträge zur Medicin Statistik, Berlin, 1825.

[3] Esquirol, Traité des Malades Mentales.

These figures show, unfortunately too plainly, that the abuse of alcoholic liquors is one of the most destructive agents to moral and intellectual life; they furthermore teach us that the disorders connected with the intellect are both numerous and diversified. But, notwithstanding their great variety, they may be confined to a few characters—mania, lypemania, imbecility, and dementia.[1]

If we now look at home, in New-York City, we find that, for the last ten years, 132,303 persons, of whom 66,629 were men, and 65,674 women, were committed to the city prisons for *intoxication* alone; that, according to the city inspector's report, from 1851 to 1862, there were 2,522 deaths caused by intemperance, and from that period to the 31st of December, 1868, they amounted to 2,170.

It is necessary to remark here, that these statistics of deaths from intemperance, as furnished by the city inspector, and now by the Board of Health, are very imperfect, as they can only relate to deaths caused directly by intemperance or delirium tremens. In other cases, where the abuse of liquor is the real cause of the disease which kills the patient, the cause of death is charged to the disease.

Another fact to which I would call attention is the enormous proportion of women we find among the drunkards. In 1862, out of 18,517 committed, there were 11,397 women, and 7,120 men. Reports of the City Prison show that women are much more incorrigible than men. The Commissioners of Charities and Corrections, in their report, dated January, 1867, in speaking of the work-house, remark: "There the vagrant, the slothful, and the drunkard, are taught, by forcible lessons in hard work, the folly of their past conduct. The term of service is brief, rarely exceeding three months, but it is a term of sharp discipline, and generally inspires among the males a wholesome dread of their repetition. On the female prisoners, however, this effect is not produced. They are subjected to the same rules as the men, but neither the sense of confinement nor their laborious employment have much effect on their conduct. They are generally committed for intoxication. They are impatient for the end of their terms of

[1] Dictionnaire Encyclopédique.

committal, but it is only that they may indulge their craving for liquor, and in a few days they are again inmates of the work-house. In many instances women have been committed thirty and forty times, and in some cases one hundred times."

Topography.—Fermented drinks with different names are known and used by almost all nations, but not in the same degree. It may be said that the use of liquors increases from the equatorial regions toward the cold climates: it is in the temperate climates that they are the less dangerous.[1]

There is in *cold countries* a particular appetite for strong liquors; this the want of stimulants and the absence of wine seem to sufficiently explain. In the campaign of Russia, in 1812, no one offered less resistance to the intense cold than the soldiers who were drinking strong liquors; they died in the snow, victims of a comatose drunkenness. Experience has also taught to the monks of Mont St. Bernard that alcohol is the most frequent cause of death among those travelling in the midst of snows. A good alimentation, principally composed of fatty substances, is the best medium of protection against cold.

Sweden is one of the countries where alcohol makes the greatest ravages. In 1837, for a population of three million inhabitants, there were one hundred and seventy thousand distilleries, producing annually one hundred and eighty million quarters (the Swedish quarter being equal to nearly one gallon); according to the most moderate figures, fifty million gallons are consumed yearly, giving, after deducting women and children from the population, twenty to twenty-five gallons a year for each male adult inhabitant.

In England, until 1751, according to Smollett, intemperance had reached such a point, that dealers used to put on their signs that, for one penny (two cents), one could get tight, and for four cents was allowed to get dead drunk, and have into the bargain some straw to sleep on until sober! To give an idea of the consumption of alcohol in Great Britain, we borrow the following from the *Revue Médicale* (July and August, 1863): "It results," says the report, "that the distilleries of Scotland have made last year 14,901,575 gallons of alcohol,

[1] Lancereaux, Dict. Encycl. des Sc. Méd.

viz., 52 per cent. of the total production of the kingdom. . . . In the year ending September 29, 1862, 94,908 persons were arrested for drunkenness, and 63,255 found guilty; 7,000 were committed to jail. The records of the coroner for the year 1862 have shown 211 verdicts of deaths from alcohol; 145 men, and 66 women."

Well-established statistics show that the number of persons whose death is caused by alcohol amounts in England to fifty thousand and in Russia to ten thousand a year.[1]

In Germany and France the use of alcoholic liquors increases every day. M. Jules Simon says that in Rouen, in the space of one year, the sale of brandy amounted to one million two hundred and fifty thousand gallons, besides cider, wine, and beer; at Amiens, says the same author, there is a consumption of eighty thousand small glasses of brandy every day.

Italy, Greece, and Spain, have less to complain about the bad results of drinking. The Spaniards have a horror of drunkenness.

In India, and other parts of Asia, according to Mr. Warren's report, the people get intoxicated with palmetto-wine and opium.

In Central Africa, several tribes make use of fermented drinks. "The idolatrous negroes," says Mungo Park (*Travels in Africa*), "drink beer and hydromel often to excess, while Mahometan negroes drink only water." Going toward the countries watered by the Orange River, the Hottentots, of a weak constitution, continue to degenerate by the unrestricted use of alcohol and brandy. Alcoholism produces there ravages beyond expression, and, in the opinion of observing physicians, the extinction of the Hottentot race may be calculated to be near its end. (*Bull. de la Soc. d'Anthropologie.*)

In Mexico and Central America the brandy, the pulque, and the chica, made with the fermented juice of the aloe, are monopolized by the government, and the right of sale conceded to contractors, called *estanqueros*, who manufacture dreadful beverages, and literally poison the Indians; some of their drinking-holes are established in the smallest places, where the unfortunates are attracted by all sorts of means;

[1] Union Méd., vol. xi., 1861.

and they are persecuted in a frightful way, when, according to old customs, they make themselves a little chica, and what is the most horrible is that, after having been drawn into the snare, they are imprisoned, fined, or condemned to public work, if they are found lying drunk in the streets!

The statistic details into which we have entered show with an unfortunate evidence that the abuse of alcoholic drinks is met with upon all parts of the globe. They prove, besides, that savage nations, as well as civilized, are inclined toward the terrible plague of alcoholism. The hardest drinkers in America are the Germans, the Irish, and the English. The black race has always been remarked for its fondness for alcoholic drinks. MM. Ruiz and Luppe pretend that three-quarters of the deaths in negroes are caused in Martinique by the use of rum.

Mungo Park, and most of the courageous persons who have travelled in Africa, are explicit upon this point. It would appear even that drunkenness in the African race has something in it of bestiality (Dr. Ivan, *De Paris en Chine*).

Physiological Influences.—In Scotland the habit of giving whiskey to small children is, according to the report of Macnisch, quite prejudicial. They become pale, sad, etiolated, subject to convulsions and functional troubles of the stomach, or of the intestines, such as vomiting or diarrhœa. Dr. Hunter[1] tried to experiment on the effects of fermented liquors on two of his children, who so far had never used wine: to one, aged five years, he gave every day a glass of sherry; to the other, who was about the same age, he gave an orange. At the end of one week there was a notable difference in the pulse, the urine, and the evacuations of the two children. The pulse of the first was raised, the urine became colored, and the fecal matters did not present the usual quantity of bile. In the second nothing was changed. Do not these facts seem to demonstrate that in youth spirituous drinks are more hurtful than in a more advanced age? Fortunately, the immoderate use of fermented drinks is rare at this period of life. It is in the adult that spirituous drinks are the best supported. At that age also is seen the greater number of cases of alcoholism. It is more

[1] Anatomy of Drunkenness.

rarely met with in old age, probably because drunkards never live to an advanced age.

Pathology.—Alcohol may be introduced into the system in two ways: 1. By inspiration; and 2. Through the digestive organs.

Orfila has intoxicated and killed dogs by making them breathe air charged with alcoholic vapors. There is no doubt that in man the same effect may be produced by the same course. In places where alcohol is distilled or manipulated, men are exposed to accidental intoxication, owing to the evaporation of the liquid.

Analogous accidents are observed in persons remaining a certain time in stores containing a quantity of alcoholic liquors. Dr. Mesnet, cited by A. Racle (*de l'alcoholisme*), reports the case of an alcohol merchant, whose apartments were situated immediately above a store where he kept his goods. The alcoholic vapors passed through the cracks of a badly-jointed floor, and he experienced every night symptoms of intoxication. This man, who was very temperate, was taken, at the end of eighteen months, with all the symptoms described under the name of acute general paralysis. Rapid and severe symptoms soon put his life in danger; but they became modified, to give rise to the chronic form of general paralysis.

But the stomach is the most common medium of absorbing alcoholic drinks. We do not know whether it is absorbed by the mucous membrane of the stomach proper, but, as we accept the reality of it, we must indicate the conditions which increase or diminish this absorption.

Dutrochet says that the absorption of liquids by the membranes is effected by endosmosis, and that alcohol does not escape this law. Now we know that liquids rich in alcohol are easily and rapidly absorbed. The presence of salts retards the absorption of alcoholic liquids, also mucilages, oils, or fatty substances, and sugar; it is well known that, when the stomach is empty, intoxication takes place a great deal easier, and with a less quantity of liquid, than when it is full of aliments: thus, when some people want to drink to excess, they take sweet oil before beginning.

The mixture taken by the English in India, and which they

call *kill devil*,[1] is composed of rum, syrup, eggs, and water; the presence of albumen and sugar diminishes the violence of the rum. They sometimes drink large quantities of it without any inconvenience, though at length particular and serious effects may result from it, especially the so-called crab-clawed malformation of the articulations of the fingers.

The stomach is subjected to several functional and organic troubles, such as loss of appetite, vomiting, particularly in the morning (*vomitus matutinus potatorum*); gastralgia, dyspepsia, and dilatation of the stomach (Morgagni), may be the alterations due to chronic gastritis, ulcer (Cruveilhier), and cancer. Dr. Racle says that alcohol cannot be considered as the productive cause of the cancer, but as the agent of localization of the diathesis.

We will not revert to the subject of pathological anatomy of acute alcoholism, that we have already exposed sufficiently; but we must say that the acute and chronic forms of the disease are not identical, though produced by the same cause; there is a great difference in the characters of the intoxication. "The first," says Marcet (on "Chronic Intoxication"), "consists in an acute and violent trouble of the functions of the nervous system, lasting generally from four to ten days; while the second variety, on the contrary, though resembling the first under more quiet appearances, takes the form of a long disease. Chronic alcoholism is a state of suffering lasting a long time without interruptions, and depriving the patient from rest night or day."

Magnus Huss, who is justly considered as a classic author upon the subject, divides alcoholism into six different forms: 1. Prodromic; 2. Paralytic or paresic; 3. Anæsthetic; 4. Hyperæsthetic; 5. Convulsive; 6. Epileptic.

As it would require too much time to enter into all the details given by the author, we will describe only the principal symptoms characteristic of each of these forms:

1. *Prodromic Form.*—Trembling of hands, mostly in the morning, relieved by the use of a little stimulant; weakness in the arms and legs. Formications in the legs, vertigo, dimness, dilatation of the pupils; on awaking, sensation of dul-

[1] Marshall, Edinburgh Medical and Surgical Journal, 1837.

ness of body and mind, ill-humor, dryness of throat, impediment of speech. These symptoms may increase or decrease, according to the way of living.

2. *Paralytic or Paresic Form.*—Predominance of decrease in muscular strength, beginning in the arms; sleep is interrupted by visions; the fingers become so weak that the patient can hardly hold any thing in his hands; titubation; voluntary motions are not totally abolished, but the patient is unable to hold himself in any position, and remains lying down; dislikes to move; cannot eat by himself; sometimes there is paralysis of the bladder, of the large intestines, of the œsophagus, and even of the tongue; some subsultus tendinum and cramps. As to his intellectual faculties, he becomes indifferent, stupid, his memory fails, his sleep is interrupted by all sorts of hallucinations of sight and hearing. The liver is generally hypertrophied, so much so as to extend sometimes to the left hypochondria.

3. *Anæsthetic Form.*—This form is generally preceded by a more or less high degree of half paralysis (paresis); the decrease of sensibility extends progressively to the sole of the foot, to the instep, the tibia, the calf of the leg, and the popliteal space, but hardly ever any higher; the same happens to the upper extremities, the diminution of sensibility not reaching higher than the elbows. This decrease of sensation is only superficial, and does not extend any depth into the tissues.

The patient can rarely make any intellectual effort; he is aware of the failing of his memory; has hallucinations of sight and hearing, and finally falls into all the symptoms of general paralysis of the insane. As soon as the anæsthetic form is well confirmed, sexual desires diminish or even disappear, as well in women as in men. There are no more erections, and the faculty of conception ceases, even when menstruation continues.

4. *Hyperæsthetic Form.*—This form is very rare, and has only been observed once by Stetsom; it is preceded by all the symptoms of the paralytic form, and is marked by formications, sensation of freezing cold alternating with burning heat in the legs or feet; sometimes the sensibility is so exaggerated that the patient starts at the least touch and screams; it is more marked in the evening and at night; sleep becomes impossible.

5. *Convulsive Form.*—The first symptom manifested in this form is trembling, of which the highest degree is a sort of chorea, afterward followed with subsultus tendinum, and finally convulsive paroxysms presenting sometimes the epileptic form, after which comes a prostration which is in ratio with the intensity of the paroxysm. If the abuse of alcohol is continued, the convulsions may degenerate into true epilepsy.

6. *Epileptic Form.*—This form is characterized by tetanic convulsions, followed by a comatose sleep. The paroxysms are more frequent by degrees, and are often preceded by an aura. Alcoholic epilepsy may degenerate into general paralysis of the insane. It may also be cured, even easily, after the suppression of alcoholic drinks. Finally, it may persist for years without much impairing the faculties of the patient.

We have seen all the different symptoms and forms of chronic alcoholism, as described above from different authors, but they are far from being the same in all subjects: in one case I observed last year, itching in the anus was a constant symptom the day after drinking; the pulse was very small, the temperature low, 95 to 96; there was some dyspnœa, some trembling, swallowing of air, but no muscular weakness. The patient had at times horrible hallucinations. One evening, when he was quiet, I had been admonishing him, and endeavoring to make him ashamed of his conduct, speaking to him about his friends and family, etc. The next morning when I saw him he told me that he had spent a very bad night, he did not sleep at all; every time he shut his eyes, he would see his room filled with all the persons he knew, and every one repeating to him the same words I had spoken the evening previous. He felt sometimes so bad, for the want of liquor, that he would drink bay-rum, or cologne-water.

Among the interesting cases cited by Morel we find the following: "A few months ago a patient was brought to me; he was eighteen years old, his walk was vacillating, his eye staring, his face injected, and his general locomotive system prostrated; he looked like a man drunk or paralyzed. When he was spoken to, he smiled in a stupid manner; his mouth remained half open, and saliva ran out of it. He only answered by yes and no, and his answers often did not accord with the questions.

His father had been in the asylum for twelve years. When brought together, the son remained impassible, and did not seem to recognize his father, though he saw him a few months before. There is a pedigree of insanity. His great-grandfather was a dipsomaniac in the full acceptation of the word, his son became a maniac, and died in the asylum, of the sequel of general paralysis; he is the father of the patient we have had here for ten years past; this man was of more sober habits than his ancestors, but hereditary descent has caused in him the evolution of a delirium of persecution (*delire de persecution*); as to his son, the present patient, he was taken without known cause about eight months ago with an access of mania, prodromic of idiocy, and in fact became completely idiotic a short time after."

Therapeutics.—I will not undertake to review all the means which have been used in the treatment of chronic alcoholism; it is easy to understand that the treatment must accord with the organs affected, and the degree of the dypsomania.

Opium, venesections, cold applications, emetics, tonics, moral treatment, voyages, distractions, etc., have been used with more or less success. Lately Dr. Marcet has praised the use of oxide of zinc, as having the effect of combating insomnia, hallucinations, and trembling. I have tried it in several cases, without result. One of the most important considerations is to break off the habit of drinking; this is extremely difficult, as alcoholism is a disease most subject to relapse. I have known patients to go for several months without drinking, and one particularly, who embarked on a temperance ship for a cruise of three years; during that period he did not see a drop of liquor; three days after landing in New York he was intoxicated, and has ever since continued the abuse of alcoholic drink.

In the annual report of the Board of Commissioners of Charities and Corrections for 1870, it is said that sixteen hundred and forty-one patients were admitted into the Inebriate Asylum during the year, but that the time elapsed since the opening of the institution has been too short to determine the value of the asylum treatment as a cure of the inebriate. "That it may be," says the reporter, "instrumental in the ref

ormation of those who are earnestly desirous to reform, the experience of the past year has demonstrated, but it will probably be found that the sanguine expectations of the more ardent advocates of inebriate asylums will hardly be justified by the results. Habitual drunkenness is a moral disease, for which, as in other forms of licentiousness, there is no specific, except the resolute determination of the patient. So far as freedom from temptation is secured, the asylum may be regarded as a means of cure; but mere isolation, or the temporary and compulsory abstinence from spirituous liquors, rarely provokes the desire of amendment. And, even in some cases where the reformation of the patients has seemed to be complete, they have, on their return to their former associations, lapsed into intemperate practices. Those addicted to drunkenness are in general too infirm in purpose to persist in their resolutions of amendment, and this infirmity of purpose is one of the sad consequences of their vice. . . . . They are impatient for the term of their detention to expire, that they may again indulge their appetites. For the small number who desire to abstain from inebriety but cannot, and for such as by their excesses disgrace their families and friends, the asylums are fitting retreats. But, for the lasting cure of confirmed inebriates, it is apprehended they will be found of little practical value."

The therapeutics of Magnus Huss, says M. Lasegue (*de l'Alcoholisme Chronique, Arch. de Méd.*), are based upon the simplest indications, and comprise but very few remedies. To remove the causes which keep up the disease is evidently the first indication to fulfil; then the troubles of digestion are treated with the help of a good diet, a few tonics, warm cathartics; finally, with the several agents advised in nervous and spasmodic affections, as assafœtida, special stimulants, as nux-vomica, etc. A single remedy deserves notice: it is the empyreumatic oil which gives that special flavor to potato-brandy (*fermentoleum solani*), in the dose of five to ten centigrammes (one or two grains), five or six times a day, in a mixture or in pills. This remedy seems to act principally in diminishing the epigastric pains and pyrosis, and appears to have given the most satisfaction.

I should regret to pass over the treatment of alcoholism, without speaking of that strange method of medication proposed and boldly used by one of Dr. Huss's countrymen, and which consists in the abuse of alcohol carried to its last limits (a sort of homœopathy at high doses). It is well known that the success and failure of this method have been praised or decried according as the experimenters were advocates or adversaries of the method. Nasse has collated experiments and the results of his observations, which have been rather favorable. The addition of alcohol to all the drinks or aliments of the patients has the effect of inspiring them with the greatest disgust for the liquor which they have abused, and of which after a while they cannot even bear the smell. The cure, however, has not been always permanent, some relapses having been observed. As the medication, after all, must be persisted in for a long time to be of any avail, it is not without dangers, and Nasse has seen death produced by this artificial intoxication.

There would be a great deal to say yet, if we were to enter into the prophylaxis, the hygiene, or the medical jurisprudence of the subject, the last especially, which is one of the most important questions, but I have already extended my remarks farther than I had intended. The coincidence of the cases I have reported in the beginning of this paper and the interest of the subject have led me farther than I expected.

I may refer those who desire further information upon the subject, to the works of Magnus Huss, Delassiauve, Morel, A. Tardieu, Racle, Lancereaux, Marcet, Brierre de Boismont, Trousseau, Esquirol, Orfila, Pinel, Roesch, Perrin, Lallement and Duroy, Seller, Hardwick, and to the complete bibliography of alcoholism given in *Dict. Encyc. des Sc. Méd.*, etc., etc.

Relapsing Fever has for some months been prevailing to a great extent at Liverpool, and has now recently appeared in Manchester, and is spreading among the poorer classes. By the last report there were more than two hundred cases. Active measures were being taken by the Corporation and the Sanitary Association to hinder the spread of the disease.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Anniversary Meeting, November 7, 1870.

Dr. John R. Van Kleek in the chair.

After the reading and approval of the minutes, the President *pro tem.* read the following farewell letter and synopsis of the business of the Society for the past year, from the President, Dr. George T. Elliot:

Gentlemen: At the close of my second term of office, the time has arrived for me to say farewell, and to return my thanks for the kindness and sympathy you have shown me during my illness, as well as for many other tokens of good feeling during my administration.

It is pleasant to know that the position of the Society has been strengthened, its numbers increased, and the benefits of its labors laid regularly before the profession through the admirable stenographic reports of Dr. Winslow. Such reports are often invaluable, securing, for the many, benefits of the unpremeditated utterances of men of experience, who lack the leisure or the inclination to write or publish for themselves.

I do not see in what way the working plan of the Society can be greatly improved. Its founders have left little to be done in that respect by their successors; and especially have they provided against an infinite waste of time and temper by the admirable custom of referring all business matters to the Comitia Minora.

The custom which I introduced, and have carried through the past year, of regularly holding an adjourned meeting, in addition to the monthly meeting, seems to me deserving of being maintained, while it is not probable that time could be found for more, in deference to the claims of other societies. I have had no difficulty in arranging for papers for the meetings, and I am happy to express my conviction that a steadily-increasing interest is being felt in the city, both for papers on scientific and practical subjects, and for the debates to which they give rise.

Therefore, with every prospect brightening for the increasing activity and usefulness of the Society, and with the sincere hope that it may not only increase its reputation, but may stimulate its fellow-societies throughout the land, there only remains to wish you all individually happiness and success, and to submit the following report of the past year's work:

November Meeting.

Address by the President.

Announcement of Committees.

Paper by Dr. Jacobi, on "The Theory and Demonstrations of the New Hypnotic, Chloral."

December Meeting.

Paper by Dr. Hammond, on "The Physiological Effects and Therapeutical Uses of the Hydrate of Chloral."

Paper by the Vice-President, Dr. Thomas, on "The Induction of Premature Delivery as a Prophylactic Resource in Midwifery."

Adjourned December Meeting.

Paper by Dr. John C. Peters, on "Arterial Sedatives."

January Meeting.

Paper by Dr. Clymer, on "Some Points in the Clinical History and Pathogeny of Locomotor Ataxia."

Adjourned January Meeting.

Paper by Dr. William A. Hammond, on "Spinal Irritation."

February Meeting.

Paper by Dr. C. R. Agnew, on "Ophthalmic Therapeutics."

Adjourned February Meeting.

Paper by Dr. Foster Swift, on "The Pathology of Eczema."

March Meeting.

Paper by Dr. Austin Flint, on "The Prognosis in Chronic Diseases of the Heart."

Adjourned March Meeting.

Paper by Dr. William R. Whitehead, on "Reproduction of Bone."

April Meeting.

Remarks by Dr. Austin Flint, Jr., on "The Physiological Effects of Muscular Exercise."

Adjourned April Meeting.

Paper by Dr. J. C. Nott, on "Intra-Uterine Medication."

May Meeting.

Paper by Dr. William T. Lusk, on "The Theory of Diabetes."

Adjourned May Meeting.

Second paper by Dr. J. C. Nott, on "Intra-Uterine Medication."

June Meeting.

Paper by Dr. William B. Neftel, on "The Action of the Galvanic Current upon the Sympathetic Nerve."

September Meeting.

Specimen of Diverticulum of the Intestinal Canal, presented by Dr. Finnell, with remarks.

Maps of the Course of the Different Epidemics of Cholera, presented by Dr. J. C. Peters.

Nomination of officers.

Adjourned September Meeting.

Paper by Dr. Austin Flint, Jr., on "The Influence of Long-continued Muscular Exercise on the Composition of the Urine."

Number of new members admitted during the year.....33
Average number present at each meeting.....80

With the reading and approval of the minutes of this adjourned meeting, the Anniversary meeting was concluded, and Dr. Van Kleek resigned the chair to Dr. Jacobi, whom he introduced as the President-elect, the session now becoming the stated meeting of date.

Stated Meeting, November 7, 1870.

Dr. Abram Jacobi, President, in the chair.

The President proceeded at once to read an elaborate and exhaustive paper upon craniotabes, illustrated by specimens and drawings. Any just abstract within our limits would be simply impossible, but the paper will immediately appear in full in the November number of the *Journal of Obstetrics*. After completing his review of this subject, he remarked as follows:

ADDRESS OF THE PRESIDENT-ELECT.

In the foregoing, gentlemen, I have not confined myself to simply a few introductory remarks. If I were more eloquent, I should have tried to thank you in more appropriate terms

than I shall probably be able to command, for the honor you have conferred upon me in electing me your President for the ensuing year. As it is, I have considered it my duty to contribute something to the scientific ends of the Society—the more so, as there are only eight or nine stated meetings in the year designated for that purpose; and for the further reason that you have deemed proper to effectually seal my lips for the next twelve months.

Still it would be improper not to express the thanks I feel for the honor you have given, and which I certainly had no reason to expect, inasmuch as I had the pleasure of being chosen your Vice-President a few years ago.

I will not speak of the customary surprise at my election, nor will I say it was undesired or unhoped for. The honor of being the President of the largest medical society in the United States, this Society being, moreover, the County Medical Society, is certainly worth craving and hoping for; and, therefore, I trust that you will appreciate my thanks as I your goodwill.

There is only one duty left to me this evening—just to give you my ideas on the position this Society ought to hold and its duties in relation to science, to its individual members, to the public, and to the body politic. Do not fear I shall be too prolix on these points. But I think the Society justifiable in wanting to know the views of its officers on the most important points.

The stated meetings of this Society are principally dedicated to the reading of scientific papers, and to their discussion. I believe that, as long as I have been acquainted with the working of the Society, its efforts compare favorably with the merits of other societies. Some of the papers I remember to have listened to were far above the average, and replete with new ideas and fertile suggestions. But we suffer from one circumstance, which has crippled our progress, and detracted from the scientific value of our exertions. We have good physicians and surgeons, we even have eminent men in many branches of the exact sciences. But we have, with very few exceptions, no profession of learning, no men who can afford to give their whole time to study, to independent work. The

great names of medical science are all European, and Europe would be very willing to receive us among the best of her own: The names of Nott and Gliddon, of Morton, Silliman, Wormley, Flint, of Elliot and Thomas, of Gross, Peaslee, and others, are so well appreciated on the other side of the Atlantic, that America, while being proud of what has been attained under the most difficult circumstances, ought to look for means to improve her scientific standing and usefulness.

It has long been a petted idea of mine, that the County Medical Society will, one day, help in solving the question how science can deliver herself from the weight of daily mechanical toil, which so impedes the freedom of thinking and working; that it will aid in creating institutions that shall be worthy of the country we live in, and afford the means to such as by Nature are destined to become the teachers of their fellows, to follow the inspiration of their genius, without the spectre of Necessity driving them into the hardship of daily mechanical work. Such men as Europe possesses by the score, are absolute requisites for us. It is true, that electricity and steam have made the world one country, and that no secrets are known in the republic of science that are not common good. But the life of civilization is reciprocity; it will not do always to take without giving. We have the greatest territory, the longest railways, the largest steamboats, the most extensive telegraphs, the boldest bridges and buildings, and the smallest original scientific literature. The wants are clear. Let us all do our share in elevating our science, ourselves, and each other.

I believe that a large number of our members will agree with me in one point concerning the composition of this Society. Not everybody can be a great genius; there are but few such; average intellect is what most of us have to be satisfied with, and beyond the gifts of Nature we cannot possibly go—neither we, nor the members of any other profession or society. But there is one thing which can always be of the highest order, because it but partially depends on intellect and education. It is wisdom and morals. While we have to be satisfied with the mental powers we can command among us, we must command the morals, not of the average,

but of the best. I speak in my own name, and in that of my colleagues, when I ask you to help in gaining the coöperation of the best men that can be found, and in keeping or driving off such as ought not to belong to us. We ought not to believe that any profession ennobles a man who is not worthy to enter. There is no trade or profession that can be protected against unworthy intruders. If there is any profession, however, that deserves not to be thwarted by them it is ours.

If it must be our object to obtain the good-will and active coöperation of good men, I entreat you, gentlemen, to help your Board in enlisting those among our numbers, whom we see here but rarely, for active work. Some of the best men of the city, who are members of our Society, are absent more frequently than the interests of the Society will permit. To whom much is given, from them much is required. If the dignity, the solidarity of the medical profession of the city and county are to become a fact, not one member ought to refuse to go on duty. There are always more men willing to listen and learn, than there are such as are able to teach. I do not make this remark with regard to such of our members only as have gained a well-deserved reputation by life-long work, but also with special regard to those younger men, in whose brains the future of American science is getting prepared, who are given to studies of a special nature, and to exact investigations.

Only those who do their full duty to themselves and their fellows will have a right or a chance to modify our relations to the public, and also to the body politic. I do not speak of the individual relations of the physician to his patients—rules cannot be given in regard to them—but of our relations to them in matters of common interest, for instance, public institutions. We live under peculiar circumstances. Our political organization is such, that our theory is frequently better than our practice. We have the best constitution on the globe, a constitution framed by wise men, and adapted to wise and prudent men, and at the same time a larger class of ignorant and illiterate fellow-citizens, in the territory of the United States, than any other civilized, even monarchical country. We have the good republican rule of electing the

best men to offices, and they say it has happened that a bankrupt mechanic has become the moral and mental leader of a large community, or an incompetent tradesman all at once a wise statesman, the savior of his country politically. The remedy will be found in a civil-service bill, the necessity for which is so generally felt that it is a Republican senator and a Democratic representative who have undertaken the task of securing it.

In our public relations generally, we have to deal with similar difficulties. As a country, we are young, upstart, and are suffering from all the incongruities of upstart communities. The great process of growth, helped by unbounded appetite and good digestion, is not yet finished. Society is by no means in a steadier condition. As there are marble palaces and hovels in close proximity, so we have sadder wealth and young education—very young and unfinished education—under the same roof. Society is not always ruled by the best; it is usually controlled by the powerful and the ambitious. The greatest and most uncontrollable power is money; no matter whether it is made by brain-work, industry, and saving, or by blockade-running, shoddy, or stock-jobbing.

The public institutions, in which the medical profession take a lively interest, are controlled a great deal by money, family, clique, or political influences. They ought to be the subjects of the closest attention on the part of the profession as such. United efforts in that direction will prove efficient, for certainly, in every board, no matter how composed, there ought to be some members willing to do the best. We ought not to despair of human nature to such an extent as to believe that there should not be some who would be glad to be guided by the judgment of experts, rather than by their own inexperienced intuition. I have always thought that the County Medical Society, by studying the affairs, the statistics, the resources, results, merits, and short-comings of our public institutions, would work in just the proper sphere, and for the benefit of our fellows and of science. There is no medical society which has more talent, and not one which has more authority. It is our duty as well as our right. The Medical Society of the county is, moreover, through the State

Medical Society, intimately connected with the State and its politics. I know the time will come when the opinion and advice of the County Medical Societies and the State Medical Society will be asked for in regard to our most important matters—I allude to medical education. The material wealth and power of the country had its best help in decentralization, but private means and competitive efforts do not appear to be able to afford the millions, with which to collect the genius and talent, and create the museums and institutions, worthy of seats of learning such as Europe boasts of by the dozen. If the time shall come for such progress, the task of advice and practical interference will be with the County Medical Societies.

I throw these hints out, believing in their being correct; requesting the gentlemen to keep them in view, and finally, requesting you to believe that, whether they are wrong or right, I shall be but too willing to work with you for our common interests.

NEW MEMBERS.

The President announced the admission to membership of Drs. Henry Griswold, Charles P. Russell, John G. Frazer, and Gustavus Langmann. He announced also the following standing committees for the year.

STANDING COMMITTEES.

Committee on Library.—Drs. Thomas S. Bahan (chairman), George M. Beard, R. J. O'Sullivan.

Committee on Intelligence.—Drs. B. S. Thompson (chairman), William T. White, Jerome C. Smith, Robert Newman, James B. Hunter, Benjamin F. Dawson, Andrew H. Smith, Salvatore Caro, Norton Folsom, Charles S. Wood, F. A. Castle.

Committee on Meteorology.—Drs. David H. Goodwillie (chairman), John Messenger, Frederick E. Hutchinson, Edwd. C. Harwood.

Committee on Diseases.—Drs. Moreau Morris (chairman), A. B. Judson, Horace T. Hanks, Leonard Weber, Henry G. Piffard, Edward Bradley, T. Munson Coan, Samuel A. Raborg.

Committee on Finance.—Drs. William B. Bibbins (chairman), Thomas Addis Emmet, Edwards Hall, Joseph Kammerer.

A communication preferring charges against a member was received, and referred to the Comitia Minora.

BLEPHAROPLASTY.

Dr. H. Knapp presented a patient upon whom he had restored the lower eyelid, with (substantially) the following remarks :

This woman suffered from epithelial cancer of the left lower lid, which I removed about six months ago. The disease was nodular in character. It extended laterally from the punctum to the outer canthus, and downward considerably below the tarsal cartilage, involving the whole thickness of the lid.

I made the incisions for the removal of the growth as you see in this diagram—two incisions passing vertically downward from the punctum and from the outer canthus to the extent of eight or nine lines, and being joined at their extremities by a horizontal one. I kept at a distance of at least a line and a half from the globe at every point, so as to get all the germs, going through the whole thickness of the lid—skin, orbicular muscles, cartilage, and conjunctiva. This left exposed a square surface, the eyeball being laid bare, and some little space below it.

To fill up this gap, I resorted to a somewhat peculiar method, which I had before employed in several cases. The horizontal incision, from the point where it joined the outer vertical one, was extended outward, and very slightly downward, across the cheek for a distance of nearly two inches. From the outer canthus a similar incision, directed very slightly upward, was carried to the same extent. On the inner side the horizontal incision was extended to about the middle line of the nose ; and from the punctum, for a short distance inward, a careful dissection was so made around the canaliculus as to allow this to be stretched along with the flap containing it. Both flaps were very freely dissected up, and then stretched so as to bring their vertical ends together at the middle of the lid, where they were fastened by interrupted sutures. They

united perfectly, so that you can now hardly discover the line of union. A mucous lining for the new lid was made of conjunctiva drawn from the inferior fold.

This method has the advantage that it gives a lid perfectly adapted to the globe. The slight traction of the flaps, as they shrink a little, is lateral, not downward, and brings them close to the eyeball. There is no ectropion, and no unsightly swelling out of the flaps, such as are so often sources of inconvenience and disfigurement after other operations. Celsus says that, when the whole lid is destroyed, it cannot be restored. This is certainly true for the upper lid, for that has a large cartilage and a special muscle of its own, without which it could not perform its office. But the lower lid is comparatively inert. If fitted nicely to the globe, it will fulfil its triple function of protecting the eyeball, holding it in place, so as to allow of the ball-and-socket motion, and retaining the tears, without a cartilage and without a particle of muscular fibre (it is possible, however, to bring in orbicular fibres from the sides). You see that here there is not the slightest lachrymation; yet there is no deficiency of tears on the lower part of the globe, although so large a part of the mucous membrane was taken away. The eye is properly lubricated, and follows all the movements of its fellow with perfect ease. And the lids can be as easily and completely closed as on the other side, though the whole cartilage is gone, and nothing of the old lid remains beyond the punctum. In short, the new lid answers every functional demand; there is barely a trace of the pseudoplasm; and, except for the absence of lashes, you would hardly notice any difference between the two eyes.

A more customary operation is that of transplanting a flap from the temple. So far as I have observed its results, both in my own cases and in those of others, there has invariably been swelling of the flaps and more or less disfigurement. Another operation is that of removing the morbid growth by a **V** incision, and filling up the triangular space by *glissement*, i. e., dissecting up the flaps at its edges, and bringing them together. This, as it affords no lateral support, almost always draws the lid downward, producing ectropion, and, of course, an overflow of tears.

The method which I have here shown has its limits. The stretching of a flap is always a calamity, and can be practised without risk of failure only where the skin is very supple. The integument of the lower eyelid, however, and of the parts adjacent is supple enough to bear stretching as much as I have done in this case; I do not know how much more it would bear.

Dr. L. Weber remarked upon the wonderful accuracy with which the lid fitted the eyeball, such as could only have been attained by the traction of the lateral flaps.

Dr. Sayre had never seen a result approaching this. He wished to inquire whether the stretching of the canaliculus might not tend to close it, and obstruct the passage of tears?

Dr. Knapp replied that, even if the punctum and canaliculus of the lower lid were obliterated, those of the upper would probably prove sufficient to carry off all the tears. But in this case, although the lower punctum was drawn outward a line or a line and a half, it seemed to perform its office completely.

The President stated that at the meeting of December 5th Dr. Fordyce Barker would read a paper. The Society then adjourned.

Bibliographical and Literary Notes.

Art. I.—*A Descriptive Catalogue of the Warren Anatomical Museum, Harvard University.* By J. B. S. Jackson, M. D., Curator of the Museum, and Professor of Morbid Anatomy. Boston: A. Williams & Co. 1870. 8vo, pp. 759.

To attempt to review this bulky volume, now before us, would be as absurd as the effort to analyze a library catalogue, and still the book is one of great value, and should not pass unnoticed. The title indicates the character of the work. It is a description in greater or less detail, according to the importance of the cases, of the specimens contained in the Museum of the Massachusetts Medical College (Harvard University). This museum was founded by the late Prof. John C. Warren, who, on resigning his chair, donated to the college the collection which he had gathered in an active practice of forty years In addition to this, he made an endowment to

the college of $6,000 for the preservation and increase of the collection. In acknowledgment of so valuable a donation, the corporation of the University voted that the museum should be called by the name of its founder.

Since Dr. Warren's donation, the museum has steadily increased, both in number and importance of pathological specimens, and it may now be ranked as one of the most valuable collections in the country. Now, to make this collection available to science, has been the object of preparing this descriptive catalogue. Histories of many of the cases from which the specimens were obtained have been published in the various medical journals of this country, and whenever it has been possible this fact, with the name and date of publication, is noted. The name of the donor in all cases where known is also given. Dr. Jackson, the Curator of the Museum, and author of the catalogue, has done his work with rare discretion. He has classified the whole collection, and arranged the catalogue accordingly. More than this, the abstracts which he has made of the histories of the cases are models of conciseness and clearness. There is but a single illustration to the volume, a frontispiece, giving photographic views of the skull of a man who lived twelve and a half years after the passage of a large iron bar through his head. This celebrated case was first published in the *Boston Medical and Surgical Journal*, December, 1848, by Dr. John M. Harlow, and is well known to the whole medical world, and, although deemed by many incredible, must now be acknowledged by the most persistent unbeliever as a true bill. The description of the lesions in the specimen is most instructive, by showing how great an injury may be inflicted on the cranium and brain, and yet the patient may recover.

We might refer to many cases of rare interest that are noted in this catalogue, but to do so would only extend this notice without adding to our appreciation of the importance and value of the book. It should be placed in every medical library of the country, and so be made accessible to the whole profession, for there are few who individually will care to purchase the book. The liberality of the Faculty of the College in publishing and distributing the volume is deserving of the

highest praise, and we desire publicly to express our thanks to them for the great service they have thus rendered to our profession.

Art. II.—*Lectures on Some Subjects connected with Practical Pathology and Surgery.* By Henry Lee, F. R. C. S., Surgeon to St. George's Hospital, etc., etc. In 2 vols. Third edition. London: John Churchill & Sons. 8vo, pp. 309, 386.

This work contains the substance of the second editions of two volumes published separately, together with several lectures which are now printed for the first time. They have been enlarged, revised, and in part rewritten. Much of the first volume is taken up with the subjects of Purulent Infection, or Suppurative Fever, and Phlebitis. Mr. Lee's views on these questions are well known, having been long before the profession. Time and experience have worked no change in them, but have strengthened the author's convictions of their correctness. He is fully up in what has been done by others in the same direction; and contests, or admits, after fair consideration, objections or agreements. Polli's treatment by sulphurous acid and the sulphites, he regards as not confirmed by clinical experience—as what sane person does not who has made any extensive use of them?—and Prof. Lister's antiseptic method he considers as still under trial.

Lectures V., VI., and VII., on Varicose Veins, Varicocele, and the Obliteration of Varicose Veins, are well worthy of careful study; as also the one following, on the Repair of Arteries and Veins after Injury. The eight lectures on the Diseases of the Rectum are very thorough, and excellent in description, pathology, and treatment; they are, in fact, a most satisfying treatise on the subject. Lecture XIX., on Excision of Joints, has three tables showing results of cases in which hip, knee, and elbow, were excised by Mr. Lee, and they compare favorably with the average mortality after amputation in the London hospitals. Of four cases of resection of the head of the femur, all were successful; in thirteen cases of excision of the knee, there were two deaths; and of four

excisions of the elbow, two made a very favorable recovery; in one, where the forearm could be flexed and extended when discharged from hospital, a sinus subsequently formed, through which exposed bone could be felt. In the fourth, which apparently for a time did well, amputation was subsequently done, on account of long-continued and severe pain in the humerus; perfect fibrous union had taken place; "a small piece of detached dead bone was found in the ulna, and a considerable quantity of new bone had been deposited on the surface of both the ulna and humerus."

The second volume includes the lectures on Syphilis, which appeared several years since, and are now mostly rewritten; together with lectures on Gonorrhœa, Gonorrhœal Rheumatism, and Ophthalmia, and on Albuminuria as a Consequence of Surgical Diseases—new subjects. We regret that we cannot speak of these at greater length, and point out their excellences in detail. We must be satisfied with a strong recommendation of them to our readers. They will in every way abundantly repay attentive study. Our space will allow us only to give Mr. Lee's conclusions respecting syphilization, as a method of treatment, after a full witnessing of the experiments made at the London Lock Hospital, by one of the apostles of what, to use the most charitable language we can command, may be set down as one of the hugest medical delusions of the day:

1. That no evidence has hitherto been adduced satisfactory to the profession that the syphilitic virus can be successfully inoculated upon a patient who is at the time the subject of constitutional syphilis.

2. That occasionally from the surface of an indurated sore, matter may be taken which, in a subject of constitutional syphilis, may be made to produce a number of local ulcerations, having some of the characters of the soft chancre.

3. That, during the continued irritation and depuration produced by such ulcerations, the manifestation of secondary syphilis will disappear.

4. That the time required for the treatment of syphilis in this way is so long, and the inconveniences attending it are so

great, that it is not at all likely to be generally adopted in practice.

These views have received ample confirmation by full and impartial trials, under every favorable circumstance, in Paris and in this city.

We recommend most heartily Mr. Lee's volumes to American physicians and surgeons, and trust that they will have a large circulation in this country. They are beautifully printed on most luxurious paper, and do credit to the publishers, the Messrs. Churchill.

Dr. W. A. Hammond reprints his essay on Spiritualism,[1] contributed to the April number of the *North American Review*, with additions. Its object is to show how little the belief in the materiality of spirits can be sustained by the evidences brought forward by its advocates; and that, even if the alleged phenomena of spiritualism could be satisfactorily shown, the hypothesis proposed in explanation of them would be the least plausible which could be suggested; there is nothing in common between the asserted facts and the interpretation. After witnessing many spiritualistic performances, the author of them says: "No medium has ever yet been lifted into the air by spirits, no one has ever read unknown writing through a closed envelope, no one has ever lifted tables or chairs but by material agencies, no one has ever been tied or untied by spirits, no one has ever heard the knock of a spirit, and no one has ever spoken through the power of a spirit other than his own" (p. 84).

There is an interesting section on "Levitation," or the faculty of rising in the air against the force of gravity, which has been claimed not only for chairs and tables, but also for the human body, the records of witchcraft and spiritualism, and the romances of the early Church, abounding with like instances. This little book is both pleasant and profitable reading; it is full of entertaining matter, and, moreover, exposes fraud and self-deception, by showing the methods of the

[1] The Physics and Physiology of Spiritualism. By William A. Hammond, M. D., etc. New York: D. Appleton & Co. 1871. 12mo, pp. 86.

various puzzling phenomena of animal magnetism, and the several forms of somnambulism, and successfully stripping them of the supernatural.

The title of Dr. Eldridge's book[1] is, we think, a poor one; for, though "less inelegant than the terms usually employed, such as masturbation, onanism, etc.," it is so unfamiliar that but few would have an idea of the contents of the book from its title. The author is very flowery in his style, and a few quotations will, we are sure, convince our readers that the work is hardly worth the perusal. The dedication is to his father, "who, through his ministrations at the bedside, has oft tempered the dread elements of disease, and mitigated the agonizing struggles of death." He speaks of "supervention of abscessal formations," of "the first and most paramount desideratum," "the mad hand of pollution," "pathogenetic panoply," etc., etc. His chapter upon pathology "contains no new ideas," while the mere fact of his recommending no less than *nineteen* remedies for the cure of this disease, from which "no grade or circle of society enjoys an immunity, as the rude habitation beggaring description, and the palace of affluence and luxury become the fostering receptacles of its silent destruction," is sufficient to show us that the author has contributed nothing but words to modern medical literature. But one paragraph meets with our approval: "Books calculated to suggest amorous thoughts, or engender lustful desires, we need scarcely say, are exceedingly pernicious; no less objectionable are the many obscene pictures and drawings upon pocket-cutlery, tobacco-boxes, and in the private albums of young men."

We have too long passed without special notice the claims of the *Practioner*[2] to the consideration and patronage of our readers. It has a character and aim peculiarly its own in the attempt to redeem therapeutics from the opprobrium

[1] Self-Enervation; its Consequences and Treatment. By C. S. Eldridge, M. D. Chicago: E. S. Halsey. 1870. 12mo, pp. 64.

[2] The Practitioner; a Monthly Journal of Therapeutics. Edited by Francis E. Anstie, M. D., F. R. C. P. Vol. IV. MacMillan & Co., London and New York.

which it has earned as an empirical series of expedients, and to endeavor to give it a higher and more definite position in medicine as a body of principles, the outcome of observation and experiment. This happy and meritorious thought belongs, we believe, to Dr. Anstie, so well known to our readers by his contributions to therapeutics, and in his endeavor to carry it out in the *Practitioner*, of which he is the projector and editor, and, if we are rightly informed, has taken the risks of a proprietary interest. The special character of the journal, and the circumstances of its establishment and publication should have protected it against the injury of a reprint in this country; and we are glad to learn that hereafter the English edition, so much superior in paper and print to the American, will be furnished to subscribers here at the same price as the latter.

M. Bourgain, in this thesis presented for the degree of doctor of medicine, describes the various methods of external urethrotomy upon a conductor,[1] giving preference to that of our *confrère*, Prof. John W. S. Gouley, of this city, over that of Mr. Syme, for the reason that it so fully realizes all the improvements proposed. "The instruments used by Dr. Gouley, consisting of a catheter-staff, a whalebone guide-bougie, and a small-beaked bistoury, are very simple, easy to handle, and readily carried in the ordinary pocket-case. Strictures of smallest calibre can be penetrated without danger of making false passages. The method of Gouley, therefore, extends the circle of operations of urethrotomy on a conductor at the expense of urethrotomy without a conductor, and is attended with far less danger—points which cannot be too highly appreciated."

The subject seems to have been suggested to the mind of the author by his former preceptor, M. Verneuil.

[1] De L'Urethrotomie externe sur Conducteur. Procédé du Docteur Gouley. Thèse pour le Doctorat en Médecin. Par Louis-Marie Bourgain. Paris, 1870.

External Urethrotomy upon a Conductor, according to the Method of Dr. Gouley. Thesis for the Doctorate of Medicine. By Louis-Marie Bourgain. Paris, 1870.

We are glad to see the merits of our collaborators so freely recognized abroad.

Dr. Gouley's paper, on which this is based, appeared in this JOURNAL, July, 1869.

DR. SEGUIN'S well-known Prescription and Clinic Record [1] has passed to a sixth edition.

The first part of this pocket-book is calculated to obviate the effects of the hurry inherent to medical practice, by a stringent and rapid systemization.

The second part is mostly devoted to the illustration of the instruments and methods of *positive diagnosis*, serviceable to extend, complete, or correct the notions of our senses: premises of sound judgment.

The last pages are arranged to group facts in regard to temperature, medical constitution, epidemics, etc., permitting physicians of different wards or regions to compare these data, improve their practice, enlarge their views, and prepare important generalizations.

We have received the first number of the *Photographic Review of Medicine and Surgery.* This journal is a bimonthly, published by J. B. Lippincott & Co., of Philadelphia, and edited by Drs. F. F. Maury and L. A. Duhring. The object of the publication is to illustrate, by means of photography, remarkable cases of disease attended by external lesions that admit of such representation. The number before us contains four beautiful prints, respectively of multilocular hydatid tumor of thigh, meningocele in an infant, horny tumors of the face, and enormous keloid growth of neck and back. As a mere work of art, the journal is a valuable addition to our literature, but, besides this, the cases are well described, and the histological appearances accurately detailed. If the cases selected for publication are such unusual specimens of disease as those delineated in the first number, the journal may well take rank in medical literature with the celebrated *causes célèbres* in jurisprudence. We wish the editors and publishers most hearty support in their undertaking.

[1] The Prescription and Clinic Record. By E. Seguin, M. D. New York: William Wood & Co. 1870.

Messrs. William Wood & Co., of this city, announce: A Manual of the Practice of Surgery. By Thomas Bryant, F. R. C. S. A Treatise on Post-Mortem Examinations. For the Use of Coroners and others. By Francis Delafield, M. D. A new edition of Bartholow on Spermatorrhœa. A Practical Treatise on the Diseases of Women. By Robert Barnes, M. D. A new edition of Isaac's Anatomical Remembrancer. A Treatise on Surgery. By Prof. F. H. Hamilton, M. D. Lectures on the Diseases of the Genito-Urinary Organs and their Treatment. By Prof. J. W. S. Gouley, M. D. A Treatise on Diseases of the Ear. By D. B. St. John Roosa, M. D.

Books and Pamphlets Received.—Catalogue of the Iowa State University, 1869–'70.

Annual Circular and Catalogue, Medical Department of Willamette University, 1870–'71.

Circular and Catalogue, St. Louis College of Physicians and Surgeons, 1870–'71.

Eighth Annual Announcement New York Medical College for Women, 1870–'71.

Report of the Resident Physician of Brigham Hall and Hospital for the Insane, for the Year 1869.

Charter of the Society of the New York Hospital, and the Laws relating thereto, with the By-Laws and Regulations of the Institution, and those of the Bloomingdale Asylum for the Insane. Pamphlet, pp. 140.

An Essay on the Causes of Infant Mortality. By John W. Thrailkill, M. D., St. Louis, Mo.

Sixth Annual Report of the Board of State Charities of Massachusetts, to which are added the Reports of the Secretary and the General Agent of the Board. 1869. 8vo, pp. 396.

Intemperance as a Disease. Report to the Medical Society of the State of Pennsylvania.

Twenty-seventh Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y. For the Year 1869. 8vo, pp. 92.

Report of the Surgery of Mobile, for the Year 1869. By J. T. Gilmore, M. D., Professor of Anatomy and Clinical Surgery in the Medical College of Alabama. To which is added a Supplemental Report on Ovariotomy and Vaginismus. By Jerome Cochrane, M. D., Professor of Chemistry in the Medical College of Alabama. Mobile, 1870, pp. 37.

From the pamphlet bearing the above title, we have quoted in another place an interesting case of removal of the tongue by Prof. Gilmore.

Reports on the Progress of Medicine.

SURGERY.

1.—*Analysis of One Hundred and Eighty-four Cases of Stone in the Bladder of the Adult treated by Lithotrity.* [British Medical Journal, June 4, 1870.]

Sir Henry Thompson, in a paper upon this subject, read before the Royal Medical and Chirurgical Society, gave an analysis of one hundred and eighty-four cases that had come under his observation. To estimate clearly the value of his results, it is to be borne in mind that the cases had been treated by a uniform method and within a comparatively brief period of time; that they occurred consecutively, and had not been selected; that all the patients were adults, and presented every variety of constitution; and, finally, carefully written records had been kept of each case:

The results of the operation were discussed under the following heads: 1. The rate per cent. of recovery after the operation, and the causes of death when it occurred. 2. The general condition of the patient after the operation. 3. The frequency of recurrence of stone after lithotrity.

The mean age of the one hundred and eighty-four cases was no less than sixty-one years. The youngest was twenty-two years old. Only three were below thirty years. The oldest was eighty-four years. There were forty-six cases of seventy years and upward. With very few exceptions, all stones of an ounce and upward were reserved for lithotomy. All obviously below that were crushed. Not one case was refused operation, not one was left unfinished, and in no instance was an operation of lithotrity completed by lithotomy. The recoveries, reckoning every kind of casualty following the operation, were ninety-three per cent.; but, omitting five cases of death, not by any means due to it, the mortality amounted to only four per cent. A second operation for recurrence of the stone was performed for thirteen of the one hundred and eighty-four cases; one hundred and twenty-two were uric acid and the urates; sixteen were mixed; forty were phosphatic; four oxalate of lime; one cystic oxide; and one pure phosphate of lime.

The important logical conclusion to be derived from the mass of facts considered was, that lithotrity is an eminently successful operation. For a certain number of cases, its success may be regarded as a certainty—absolutely without fear of any contingency, except such as attends the minor operations of surgery—for example, the opening of a small abscess, or the passing of a catheter. For the author stated that he had never lost a patient in the whole course of his experience after crushing a stone which was no larger than a small nut; and this he considered was a size at which, with few exceptions, every stone ought to be discovered. But this very fact led the author to remark that the success of lithotrity cannot therefore be considered apart from the knowledge of the extent, in regard of the magnitude of the stone and the constitution of the patient, to which the capabilities of the operation have been pushed. When it is employed for stones as large as a date or a small chestnut—and it is impossible to deny

the excellent chance of success which this method offers to the subjects of such stones—a certain but still only small proportion of deaths must be expected. And the rate of mortality will correspond with augmentation in the size of the stone, and with the amount of existing disease and age on the part of the patient. Given a small stone in a fairly healthy person, and success is certain; the possibility of contingency in such a case depending only on the presence of those remote and excessively rare conditions which will make for an individual here and there the mere passing of a catheter a cause of death. The rule observed had been, for the most part, to apply lithotrity to all calculi obviously less than an ounce in weight, easily discovered by sounding, and to operate on all larger ones by lithotomy.

In this connection we print below an abstract of a paper read by Mr. Teevan at the recent meeting of the British Medical Association at Newcastle-on-Tyne. The cases on which he had operated were twenty in number:

Nine of the patients were adults, and eleven boys. Six of the adults were operated on by lithotrity, and three by lithotomy, the latter operation being necessitated in each case by the great size of the calculus. All the boys were operated on by lithotomy. Eighteen of the patients recovered, and were permanently cured, and two died. When possible, lithotrity ought always to be preferred to lithotomy in adults. For the successful performance of lithotrity, the stone ought to be of moderate size, and the bladder not too much diseased. The removal of a calculus by lithotrity was one thing, and the cure of the patient another thing; for there were sufferers now alive in whom surgeons had successfully removed the calculi by the lithotrite, and yet failed to cure the patients—a state of chronic cystitis and paralysis remaining. In old men the lithotrite ought only to be used for a couple of minutes at a sitting, the patients being merely confined to bed for a day or so in each week. The confinement of old men to bed was perilous. In young men large phosphatic stones might be crushed with safety. Extensive heart-disease forbade lithotrity, as patients had lost their lives while straining in passing fragments. Much information was yet required before we could ascertain the extent to which the introduction of the lithotrite had reduced the mortality after operations for stone. The median operation of lithotomy was only justifiable for small stones, and these had much better be crushed. In lateral lithotomy the stone ought to be cut and not torn out. There was no such thing as dilatation of the prostate; it could be torn, but not dilated. The external incision ought to commence low down, as thereby less blood was lost. The internal incision ought to be free, as the chief dangers incident to lithotomy were phlebitis and pyæmia, resulting from the bruising of the parts in tearing out the stone. A rectangular staff ought to be used, and held with two hands, the lower resting on the pubes. The forceps was unnecessary in children, and often in adults, for in the former the stone could be better removed by the left forefinger, and in the latter a simple polypus forceps ought to be used, when wanted, in preference to the heavy and unwieldy instrument now employed. The introduction of a tube after lithotomy was useless if there were a good assistant in charge of the case. Mr. Teevan concluded by relating the results of a personal examination of the various pathological museums, and of a series of experiments which he had performed on the dead subject.

2.—*Case of an Extra-uterine Fœtus successfully extracted from the Bladder.* By Joseph Bossuet, M. D. [Medical and Surgical Reporter, September 3, 1870.]

Although this case has remained unpublished for more than fifty years, its rarity makes it well worth reproducing in our pages:

In the month of October, 1807, Mrs. Coleman, of Braintree, Mass., found herself in a state of pregnancy, attended with uncommon distress, and some pungent pains shooting from the hypogastric to the epigastric regions. She continued in that way until the latter part of the ensuing spring, when she had all the symptoms of a true travail. She sent immediately for an accoucheur, who, not being able to come at the child by the natural passage, ordered large doses of opium, with the injunction to repeat them as often as the pains recurred. A fortnight after that the pain abated, ... the time when I suppose the child died in the abdomen. She was for two months afterward very much troubled by a disagreeable sensation, which she called drawing.

The abdomen swelled to a very large size, which after some time gradually subsided. The three succeeding years she passed without much distress, but at the end of that time she began to experience very acute pains attended with evacuation, by the urethra, of a matter sometimes of a yellow cast, sometimes bloody and of a very fetid smell, and voided in the same time, by the same canal, some very small bones. A communication also took place between the bladder and the rectum, so as to let the fæces and urine pass either way.

During five years before my first visit to her she experienced the most excruciating pain night and day. Having been informed of my recent arrival from Martinico, with my family, and that I resided in Hingham, she sent for me the 20th of May, 1816. I visited her the same day, and, after a critical examination, found the child in the bladder (mostly in the bladder and partly in the abdomen), crusted over with a calculous matter. Considering her in a dangerous situation, I advised her to submit to the operation of lithotomy as the only means of relieving her from her sufferings. She readily consented to it, and the operation was performed by me, the 17th of June, 1816, attended by Drs. Noah Fifield, of Weymouth, and Robert Thaxter, of Dorchester, two respectable members of the Medical Society, in whose presence one hundred and forty-six bones of a fœtus, about seven months old, were extracted, together with a stone about the bigness of an olive. She has since entirely recovered, and enjoys at present a perfect state of health, without any pain whatever; but the communication between the bladder and the rectum is not yet wholly obliterated.

3.—*On Burns. From* Mr. F. C. Skey's *Clinical Lectures on some Stray Subjects of Hospital Surgery.* [Lancet, August 27, 1870.]

Surgeons have described this form of injury as affecting the human body in three degrees of severity: 1. When the skin alone is the seat of injury. 2. When the areolar tissue is involved. 3. When all the structures of the injured part are implicated. I shall not trouble you by enlarging on the various degrees of injury. I wish to draw your attention to the important subject of the treatment of burns and scalds in all their variety. Now, what is the treatment usually adopted, I do not say in this

hospital nor in that, but adopted by the surgical profession generally, and especially by the medical authorities attendant on mines, founderies, and in our larger iron-works? The affected parts are bathed in oil—carron-oil, as it is called—or oil and lime-water in combination. The patient undergoes this process of immersion or local bathing in this very harmless but equally useless compound. The virtue of the oil, it would appear, is in a ratio with the quantity consumed on each case, and therefore the great curative remedy is poured on with boundless liberality. The limb is then placed in flannel, or more commonly in coarse cotton-wool or wadding, and the patient is consigned to his bed. Now, observe, this treatment, be it good or be it bad, affords no relief from the exquisite suffering caused by a large burn, the pain of which continues uninterruptedly for several days, depriving the sufferer of sleep and indirectly of food. But in the end he recovers, and that, it would appear, is sufficient for the cause of surgery. But recollect that the cause of surgery can only be represented by surgery of the highest class, which demands the quickest recovery combined with the smallest amount of human suffering; and these essential objects are not obtained by carron-oil. The principle I am anxious to insist on as far preferable to any involved in the carron-oil treatment is exhibited in the results of the application of heat to any small burn on the hand, as from a drop of melted sealing-wax. The very smart pain occasioned by this trivial accident is entirely relieved by immersing the hand in hot water or by holding the hand to the fire for a few minutes. If this be a fact—viz., that by the brief application of an agent promoting pain (for *heat* is not essential) one important element of the injury, that of pain, is quickly relieved—there must be some virtue in the principle involved. And there is a virtue, and a very important one; for I maintain, from many years' experience in the treatment of burns, that not only is the pain far more quickly relieved, but that the cure is hastened in the same proportion.

Some half a century since this principle of treatment by local stimulants was enunciated to the profession by Dr. Kentish, of Bristol. Its value was at once acknowledged by observing men; and I think I am not mistaken in asserting that the principle was adopted in the majority of the hospitals of the metropolis, if not in all. I know that it was thoroughly appreciated by my own teacher, Mr. Abernethy, who would naturally influence the opinions of a considerable proportion of the profession. The agent employed by Dr. Kentish was spirit of turpentine, which was applied, diluted or otherwise, over the affected surface. The application was accompanied by an increase of temporary pain, which, however, passed off in the course of a few hours, and thus improved the condition of the patient. The amount of pain was in relation to the extent and severity of each injury. How it has happened that we have reinstated the fomentation and carron-oil system again I know not. I don't understand how a surgeon who has once adopted the application of treatment by local stimulants could abandon them for the negative principle of oils or warm water. I wish to recommend to your recollection the employment of a remedy on the same principle I have for many years resorted to both in St. Bartholomew's Hospital and elsewhere—viz., a solution of nitrate of silver in a proportionate strength to the extent and severity of the burn. I have used the solution in the strength of from five to twelve or more grains to the ounce of water. The lotion would, of course, be modified by the age of the person, five grains, or about five, sufficing for a child. If the whole surface be freely bathed with the solution, and entirely covered up in cotton-wool, and a moderate opiate be administered in a glass of brandy-and-water in strength proportioned to the age and habits of the patient, with the object of counteracting the sense of chilliness that will otherwise necessarily follow in all these cases, I think you

will find you have made a good start in the future management of your case. In all cases, whether of burn or scald of the external skin, I say, resort to local stimulants. The soft and soothing system, I believe, answers no useful purpose whatever beyond that of excluding air, if that be, as supposed, a great desideratum.

I prefer the solution of nitrate of silver to the turpentine of Dr. Kentish, because it can be made of variable strength to suit each individual case, and the relief it affords after its first application is yet more complete than that afforded by the latter remedy. The theory of the excellent results of the treatment of burns by provocatives, or remedies that provoke physical pain, is not very clear. It would appear that relief invariably follows a temporary increase of pain; but one is inclined to ask whether the benefit consists in the actual presence of pain, and how far the same agency—whether of fire, hot water, turpentine, or the nitrate-of-silver lotion—would be equally beneficial when the subject of the injury was placed under the influence of chloroform. This question I must refer to others more fortunate than I in having at their command a larger field of inquiry than now falls to my lot.

My advice to you is, to abjure carron-oil and all demulcents, and to adopt the treatment of burns and scalds by local stimuli.

4.—*Nephrotomy and Renal Lithotomy.* [Chicago Medical Examiner, September, 1870.]

Prof. Moses Gunn, M. D., of Chicago, read a report on Surgery at the last meeting of the Illinois State Medical Society, from which we make the following interesting extract:

In April, 1869, Mr. Thomas Smith read a paper before the Royal Medical and Chirurgical Society, on the subject of "Nephrotomy as a Means of treating Renal Calculus." In this paper it is stated that Hippocrates mentioned and recommended the operation of nephrotomy in certain cases attended by external swelling. But one case only of the operation, however, had ever occurred; that was a successful case on the person of the British consul, at Venice, by an Italian surgeon, in the seventeenth century. Since the presentation of Mr. Smith's paper, Mr. Simon, of Heidelberg, has successfully extirpated the kidney of a female patient, for an incurable urinary fistula, originating in a wound of the ureter made during an ovariotomy, In February of the present year, Mr. Durham, at Guy's Hospital, London. cut down upon the kidney for the purpose of removing a renal calculus. Unfortunately, no stone was found. But, notwithstanding, his patient was greatly relieved by the operation. Your reporter has, also, during the current spring, in contemplation of an operation which he subsequently made on the 16th of April, repeatedly cut down upon the kidney in the cadaver. In the absence of definite directions upon the subject, these sections were made in order to arrive at a safe and expeditious method of operating. The following seems to be the only safe method which the anatomy of the region will permit: An incision is carried from the eleventh rib just over the outer border of the erector spinæ muscle, to the crest of the ilium, and down upon the surface of the outer layer of the lumbar fascia; this structure is now divided upon a grooved director, and the muscle is drawn inward and backward, by an assistant, with an angular spatula. The middle layer of the lumbar fascia is next divided in a similar manner to that pursued in division of the superficial layer; this incision will call for the ligation of two or three small arteries. The quadratus lumborum muscle is now drawn inward and backward with the erector spinæ, and the anterior or deep layer of the fascia is uncovered, an incision through which brings

us to the posterior surface of the lower two-thirds of the kidney, obscured only by loose areolar tissue which contains variable amounts of fat, according to condition of the patient. Careful dissection of this tissue will now expose the hilus of the kidney and the expanded commencement of the ureter. Tactile examination will enable the operator to ascertain the size and firmness of the kidney, and also the condition of the pelvis of that organ, and the commencement of the ureter, which latter can be easily opened in case a renal calculus is found. Should the surgeon, however, desire to push his operation further, he can carefully and readily pass his index-finger around the kidney, separating it from the peritoneum; the upper extremity of the organ can now be dislocated from its position in front of the lower two ribs to a corresponding position behind them, and thus the whole organ is readily enucleated. This process of enucleation is now carried inward along the renal vessels as far as may be necessary to enable the operator to pass a stout ligature around them, after which they are divided as close to the hilus as possible.

On the 16th day of April last, as before stated, I made an exploratory operation upon a patient of Prof. Allen's, who for five months had suffered from symptoms which indicated the probable presence of a renal calculus. The operation was conducted upon the plan described above, and was performed in the presence and by the aid of Prof. Allen, Drs. Chesbrough, Parks, and Smith, the latter gentleman being an uncle of the patient. But little blood was lost, and posterior surface of the kidney was readily reached, which position enabled us to make tactile examination of the pelvis and commencement of the ureter. But, like Mr. Durham, at Guy's, we were disappointed in our expectations of finding a calculus. The organ seemed shrunken and soft, but was not interfered with, as the patient had enjoined upon us that in no event should the kidney be extirpated. A pledget of lint was laid on the bottom of the wound, and with three ligatures was brought out at its lower angle, the upper half being closed with three sutures. The operation was borne well, though the patient was greatly reduced from his long and severe suffering. Like Mr. Durham's patient, ours, too, was greatly benefited by incision; the nausea which had been nearly continuous and extreme, was completely relieved, and the pain, which had been severe, wholly disappeared.[1]

As some very erroneous statements have been made and circulated regarding Prof. Simon's case of nephrotomy, alluded to in the above paper, we copy from the *Edinburgh Medical Journal*, of May, an account of the case by the operator. Prof. Simon states that this abstract must be accepted only as a provisional communication, and that it was prepared solely to correct the inexact statements above referred to. A complete and detailed narrative will probably be made hereafter:

Our patient (a laborer's wife, aged forty-six) was operated upon by Dr. Walther, of Offenbach, on account of a cystoid tumor of the ovary, one year and a half previous to her admission into the Heidelberg Surgical Clinique.

After the abdominal incision was made, it was discovered that the ovarian tumor was so intimately connected with the very enlarged uterus that that organ had to be removed at the same time as the degenerated ovary—i. e., that ovariotomy had to be combined with hysterotomy. But the ovarian tumor was not alone connected with the uterus, but also with

[1] The improvement was of six weeks' duration, after which time the old symptoms gradually reappeared.

the left ureter; so that, at the removal, the ureter was severed in its whole circumference.

The patient recovered, but an abdominal-uretral fistula remained, through which all the urine which was produced by the left kidney involuntarily escaped. I attempted to cure this intolerable state by trying to make a communication between the ureter and the bladder, and by a subsequent occlusion of the abnormal passage, which opened through the abdominal walls and into the vagina. But after many unsuccessful attempts, during which even the life of the patient was several times at stake, we had ultimately to give up this plan of cure. Attempts to produce artificial occlusion of the ureter (and by that means obliteration of the kidney) had also to be abandoned on account of very dangerous symptoms, which made a favorable result most doubtful.

Ultimately I contemplated extirpation of the kidney. By perusing the literature of the day, by experimenting on dogs, by anatomical researches, and by comparing this operation with other somewhat similar operations which had been introduced into surgery, I had convinced myself that, in our case, nephrotomy was not only justified, but even indicated. Consequently, I performed extra-peritoneal nephrotomy in presence of a great number of medical practitioners and students, after having stated the reasons which, in my opinion, urged me to perform the operation. The patient stood the operation pretty well, and, after six weeks, was so far advanced toward recovery that she could leave her bed. The ligatures of the pedicle did not show any sign of detachment, so I did not try to remove them forcibly, because there was increased suppuration and pain whenever strong traction was made. After six months the ligatures came away with comparatively slight traction. Two days afterward, the sinus in which they were embedded was closed, and thus the whole wound was cicatrized.

After the ovario-hysterotomy there remained a contraction of the muscles of the calf of the right leg, which took a long time to cure. The patient, whose health, as may well be imagined, had been seriously impaired in consequence of all the operations which she had undergone within three years, is now in a most satisfactory state of health. She is engaged all day in needlework, and sometimes takes long walks in the environs of Heidelberg. The reason that she has not been long ago discharged is, that we wished to have her as long as possible under observation, and because we knew that she must, on going home, return to very reduced circumstances.

These are the chief points of our operation, which hitherto has not been attempted in man. In a pamphlet on the case, which will be published in a couple of months, I shall enlarge on the admissibility of nephrotomy in my case; then I shall give the history of the case, and describe the operation, and shall discuss the bearing of my case on the operative treatment of some diseases of the kidney; concluding with observations at the bedside, and the relation of the experiments on animals, which I have deemed necessary for the decision of some physiological and pathological questions no less interesting than important.

5.—*Almost Complete Severance of the Body without a Break in the Skin.* [British Medical Journal, August 20, 1870.]

R. A., aged nineteen, a telegraph clerk, was seen near Camden Road Station at 11.50 on the night of Saturday, June 26th. He was then sober, had over two pounds of money in his possession, and stated his intention of going to Euston Square by the 11.56 train. Although he was known to the officials, and there were very few passengers, no one saw him get in at

Camden Road, or get out at Euston Square. The ticket-collector also said that he should have recognized him at once had he been in the train. The train, after discharging at Euston, was backed into a shed; and, as two shunters, who had performed this duty, were returning along the line which the train had just passed over, they found R. A. lying on his back just inside the station, straight across the outer rail, with his head between the rails, and his hat tilted over his eyes. He was alive when found, but died in a few minutes. The body was at once brought to University College Hospital. It was clothed in a long jacket, waistcoat, and trousers, of thick, coarse cloth, on which the marks of the carriage-wheels were plainly visible. Only a few pence were found in his pockets. There was not the smallest wound on the body, and only a few abrasions of cuticle across the abdomen. After some hours, pretty extensive ecchymoses appeared. On opening the abdomen, all the abdominal muscles were found completely cut through horizontally, retracted, and curled up, leaving a gap five or six inches wide. The back muscles were in the same condition. The right kidney was cut in half. The transverse colon and a large piece of the ilium were lying free in the abdomen; and the body of the third lumbar vertebra was crushed literally to powder; every thing was divided except the skin. The rest of the body was healthy.

The case excited a good deal of interest at the time, and remarks on its occurrence appeared in most of the daily papers. Some suggested suicide; but suicides generally put the head or neck on the line. The position of the body, laid out quite at right angles to the rail, with the hat on the face, favored this view; but no motive was made out. Many seemed to think he had been stunned, robbed, and thrown out; but the absence of any bruises, and the position of the body, almost negatived this view. His money was loose in his pocket, and probably fell out in the moving. Lastly, the driver declared that it was impossible that he could have been run over at all; for, besides the three carriages and break-van, his engine weighed over thirty tons, and must infallibly have cut him in half. So it did, except the skin, which was protected by three layers of thick cloth, etc. Neither driver nor guard felt any shock as the train passed over him. Altogether, the case presents several points of great medico-legal interest.

6.—*Complete Dislocation of the Tibia forward; Gangrene; Amputation; Recovery.* By J. W. Thompson, M. D. [Nashville Journal of Medicine and Surgery, October, 1870.]

W. B——, a steamboat mate, aged about twenty-eight years. The left tibia was dislocated forward, by explosion of the steamer Phantom, September 14, 1869. I saw him two or three hours after the accident, and had him conveyed to St. Vincent's Infirmary. On examination, I found the head of the tibia pushed considerably forward, and the condyles of the femur resting beneath the muscles of the calf of the leg.

After putting him under the influence of chloroform, with the aid of two assistants, flexing and extending the limb, with my knee resting just below the popliteal space, I succeeded in reducing the dislocation.

The circulation in the leg was feeble, and continued to become more so, notwithstanding the limb was enveloped in large flaxseed-poultices, and other stimulating applications were used, until the fifth day, when dry gangrene commenced, and continued to progress, and, on the eighth day, the entire limb was gangrenous to the knee.

On that day, after consultation with Drs. R. Saunders, D. H. Maxwell, J. G. Brooks, and H. M. Gilson, I amputated the thigh in lower third, as-

sisted by the three gentlemen last named. In about two or three hours I called to see my patient, and I never witnessed such excessive perspiration. It was so profuse, that two of the Sisters of Charity, constantly rubbing him with cloths, could not keep it removed. The prostration was so great that I almost despaired of being able to bring about a reaction. I directed for him twenty drops of tinct. ferri chloridi, with two grains of quinine, every hour or two, according to circumstances; also whiskey and milk, freely. The stomach would not retain the whiskey, but the other remedies were continued promptly during the night, and the next morning I found my patient somewhat reacted, and presenting more favorable indications. He continued to improve, and at the end of six weeks he was discharged from the infirmary, the stump almost entirely healed.

Dr. J. G. Brooks examined the limb after it was amputated, and found the coats of the popliteal artery and vein very much lacerated. These vessels were torn and compressed by the downward thrust of the condyles of the femur.

That dislocation is attended with the greatest deformity. I never saw such a dreadful deformity as this case presented. A considerable number of citizens had collected at the wharf to see the unfortunate wounded, and I heard many of them remark, "That limb is broken all to pieces." I merely instance that, to indicate the appearance of this limb.

Surgical statistics show this to be a very rare dislocation. Prof. Gross, in the last edition of his work on Surgery, states that he has never met with but one case. Prof. Hamilton, in his work on Fractures and Dislocations, copies the notes of four cases of this dislocation, and states that "B. Cooper, Malgaigne, Little, and others, have recorded examples of this accident."

As this dislocation is of rare occurrence, and thinking this case presents some points of interest, I have concluded to offer it to the notice of the profession.

7.—*Avulsion of the Arm and Scapula; Recovery.* By T. E. Jones, Esq., Llanasa. [British Medical Journal, May 28, 1870.]

Compare, with this case, that referred to in the February (1870) number of the Journal as occurring in the practice of Dr. S. W. Thayer, of Burlington, Vt.:

On November, 1869, Joseph Parry, aged eleven, met with an accident at Trelogan Lead Mine. Early that day, when he went to work, he found a piece of loose rope, and threw it over a cog, or rather a hook, which was in motion. His coat and arm became entangled in the rope, and he was dragged between an iron rod and a wooden frame six inches apart. The machine, being worked by steam, could not be stopped immediately; consequently, his right arm with the scapula attached was clearly drawn off. The median and ulnar nerves remained hanging down his side like two white strings. The humerus was fractured in two places—at the middle and at the surgical neck. There was also a wound skin-deep seven inches long in the left groin, which healed by the first intention. He lost some blood, fainted, and fell into a heap of gravel, which filled the wound. When I saw him between 8 and 9 A. M., he was in a state of collapse; his pulse was scarcely perceptible; his feet, hands, and face, were cold and livid. Warm bottles were applied to the feet and body, and brandy-and-water was given every fifteen minutes. It was 3 P. M. before reaction was fairly established. I then cleaned the wound of the stones, removed the median and ulnar nerves, and, after some difficulty, secured the axillary

artery, which was surrounded by the brachial plexus. Two other small arteries were also tied. I next removed a piece of the clavicle two inches long to enable me to bring the parts together, which were kept *in situ* by metallic sutures. The wound was dressed every four hours with solution of carbolic acid. A fourth of a grain of opium was given night and morning, and continued for a fortnight. Brandy, beef-tea, and milk, were given frequently.

November 30th.—He had passed a restless night, and was sick and feverish; pulse 120, tongue furred. He was ordered to take every third hour a tablespoonful of a mixture containing a drachm of chlorate of potash and half an ounce of liquor ammoniæ acetatis in four ounces of water.

December 1st.—He had had a good night, and was less feverish; pulse 90. He passed no urine since the previous evening, and his bowels were not moved. He was ordered to have a senna-draught immediately. Warm fomentations, by means of wet flannels, were applied to the abdomen.

December 2d.—He had passed a good night, and voided urine freely; pulse 80, tongue clean. The bowels were not moved. He was ordered to have immediately two grains of calomel and a scruple of jalap. In a few hours after taking the powder, the bowels acted.

December 5th.—The wound was looking healthy. Three of the sutures were removed.

December 6th.—The remaining sutures were removed. The wound was dressed with long narrow strips of plaster an inch apart, and solution of carbolic acid was applied as before. This treatment was continued for about three weeks, when the wound was healed, except where the ligatures were. One of the ligatures came off on the seventh, and the other two on the eighth week; and the lad was perfectly well, and running about.

I found the opium and carbolic acid most useful in this case.

8.—*Paracentesis Thoracis in Acute Pleurisy.* [Paris correspondent British Medical Journal.]

Since Dr. Peter took charge of the medical clinic at La Pitié, on the 1st of January of the current year, up to this date, he tells me that he has performed paracentesis of the chest in nine other hospital cases. From the official records I have derived (with permission) the following particulars. The last four cases on the list came under my own observation:

1. *January.*—Diagnosis: Pleurisy of the right side, consecutive to pulmonary apoplexy. Organic disease of the heart. Result: Death. The fatal result, retarded by the operation, followed a succession of morbid symptoms caused by the cardiac disease.

2. *February.*—Diagnosis: Tubercular pleurisy of right ride. Result: Death. Relief followed the operation; and death took place five months afterward, from the progress of the pulmonary phthisis.

3. *March.*—Diagnosis: Chronic pleurisy of the left side. Result: Cure.

4. *April.*—Diagnosis: Acute pleurisy of the left side. Result: Cure.

5. *May.*—Diagnosis: Acute pleurisy of the right side. Result: Cure.

6. *May.*—Diagnosis: Scarlatinous empyema of the left side. Pericarditis. Result: Amelioration. In this case there was a fresh attack of pleurisy; and at the same time phenomena depending on pulmonary tuberculosis.

7. *June.*—Diagnosis: Acute pleurisy of the left side. Result: Cure.

8. *July.* Diagnosis: Acute pleurisy of the left side. Result: Cure.

9. *July.*—Diagnosis: Pleurisy of the right side in an individual in whose family phthisis is hereditary. Result: Cure.

10. *October.*—Diagnosis: Particulars given above. Result: Cure.

It appears, then, that, taking into account all the hospital cases, ten in number, in which paracentesis of the chest has been performed by Dr. Peter since he took charge of the clinical wards of La Pitié in January last, the results have been most satisfactory—as satisfactory as those recorded by Trousseau. In fact, the results obtained were as good as it was possible to expect. The cure was complete in seven cases; in one case, complicated with scarlatina and tubercular disease, there was amelioration; and, in the two cases in which death occurred, the operation prolonged life, and afforded great relief; the fatal issue being ultimately caused by the primitive protopathic disease, of which the pleurisy was an epiphenomenon.

In this connection we may compare with interest the results of M. Dupré's (of Montpellier) experience as detailed in a paper read to the French Academy of Medicine:

He commenced by dividing cases of pleuritic effusion into three principal classes: 1. Those inflammatory effusions accompanying or succeeding to true pleurisies. In these the operation is unnecessary, as they tend, as a rule, to get well without it. 2. Serous effusions or hydropsies, the result of organic lesions. The special dangers of the lesions which cause the effusions, and the tendency to increase and recurrence, show that in these cases the operation is ineffectual. 3. Those cases which the author calls rheumatismal or sero-plastic effusions. These latter are in some cases connected with pleurodynia, neuralgia, and articular rheumatism, with great pain and without a proportional amount of fever. In these cases the effusion occurs without pain, oppression, cough, dyspnœa, or even fever, with little loss of sleep or appetite; yet the patient is pale, full inspiration is checked, the decubitus is confined to one side, there is *malaise*, the pulse is irregular, perhaps dicrotic; there are signs enough to show what is wrong even without the exact evidence of a physical examination.

Against the latter cases, a purely medical treatment is slow in its effects, uncertain in its results, in some cases quite powerless. The slowness of its action permits injury to organs which may be irreparable, and even exposes the patient to the risk of sudden death.

M. Dupré shows that evacuation of the fluid by operation can prevent these accidents, and that the trifling operation in itself adds nothing to the danger of the case.

He has operated seventy-six times, with the following results:

Operated on during second week,	47;	cured, 46;	died, 1
" within first month,	19;	" 15;	" 4
" within second month,	8;	" 5;	" 3
" fifth month,	1;	" 1;	" 0
" seventeenth month,	1;	" 1;	" 0
Total,	76;	" 68;	" 8

Unless there are any special indications, M. Dupré makes the puncture in the sixth intercostal space on the right side, and the seventh on the left, in a vertical line, extending from the centre of the axilla to the hypochondrium.—*Gazette des Hôpitaux*, No. 37, 1869.

9.—*Amputation of the Scapula with the Arm.* By Kenneth McLeod, M. D. [Edinburgh Medical Journal, December 1869, from Indian Medical Gazette, September, 1867.]

To complete our record of the cases wherein this formidable surgical procedure has been adopted, we append the following. Our previous record (January, 1869, and February, 1870) comprises, we have every reason to believe, all the cases hitherto published:

On Saturday, June 29, 1867, a boy, about two years old, was brought to the Jessore Charitable Dispensary with an enormous tumor of the right arm, extending from the elbow to the infra-spinous fossa of the scapula. The child's parents stated that the tumor had existed at birth, and was originally small, but that it had increased much and rapidly of late, and that the child had strong fever, and was falling off in health. The tumor measured seventeen inches in circumference, and was tense and fluctuating; the skin covering it was smooth and distended, and the superficial veins much enlarged. The patient was in a high fever, and, though not much emaciated, was wan and feeble-looking.

An exploratory puncture was made with a small trocar, but only a few drops of straw-colored fluid issued. After a careful examination I found that the tumor was so intimately connected with the muscles in the infra-spinous fossa, that any operation for its removal must include the scapula. Believing that the fever was symptomatic, finding the other organs healthy, and feeling that amputation gave the only chance of saving the child's life, I proposed it to the parents, and obtained their consent. The operation was performed on the 30th June. The patient having been put under chloroform, I took a semi-lunar flap from the front of the armpit and shoulder, and cut down at once through the pectoralis major and minor on the axillary vessels. These were secured immediately with a ligature; but the vein discharging copiously, and a large branch (acromial) quite close to the ligature on the artery bleeding actively, I passed a needle, through the skin under the vessels, and thrust the point outward and upward so as to rest on the clavicle. This expedient *completely and at once* stopped all bleeding. The remaining steps of the operation were rapidly performed. The clavicle was cut through, and the scapula drawn out from the body; the axillary glands, which were enlarged, were swept away. The serratus magnus were severed close to its scapular attachment; the trapezius, omo-hyoid, and levator anguli scapulæ were divided at their insertions; the rhomboids were next cut, and the latissimus dorsi divided near its insertion. The whole arm and scapula were then removed. The supra-scapular artery was the only one requiring ligature, and the semi-lunar flap fitted accurately into the concavity of the other flap. The whole wound was sutured, and looked exceedingly neat. The child recovered from the chloroform, began to move about, and drank some milk. I gave directions for its management, and left it in hopes that all immediate danger was past. I was greatly mortified when I heard that, soon after I had left the child, it grew pale, showed signs of oppressed respiration, and soon died. Death could not have been caused by loss of blood, for the amount lost was comparatively small; so that I am forced to the conclusion that the shock of the operation, coupled with its previous condition, was too much for the child.

I made two deep incisions through the tumor, one on its radial, the other on its ulnar side. The former laid open a number of cells or cavities, lying in firm white tissue. These cavities communicated with each other, and contained some soft, friable, curd-like matter, and a straw-colored fluid, which coagulated on emission. In some of them a colloid substance was apparent. The ulnar incision showed a soft, elastic, homogeneous mass, with a tendency to the formation of cysts and softening.

The diseased mass was nowhere bounded by any cyst, but was gradually lost in the healthy parts. The bone was not involved, but all the muscles of the arm and infra-spinous fossa were more or less diseased. All the morbid texture had been removed by the amputation.

No *post mortem* of the body was obtained. The tumor was forwarded to the Medical College Museum, and its microscopic appearances are thus described by Dr. Colles, the officiating Curator, in a letter to me:

"The 'soft, friable, curdy matter' contains hardly a trace of stroma. It consists, besides a large quantity of fat globules and granules, of cells, some of which are oval or circular, with granular contents, and without nuclei. Others are polygonal, fusiform, or caudate, with well-marked nuclei, and (in many cases) nucleoli—and, in short, possess all the characters of the so-called 'cancer-cell.' The firm white tissue of the tumor contains the same elements, entangled in the meshes of a remarkably dense and closely-woven stroma of white fibrous tissue."

10.—*Ligature of the Internal Iliac for Diffused False Aneurism in the Gluteal Region.* By Prof. Gallozzi, of Naples. [British Medical Journal, January 22, 1870.]

A young man, named Domenico Grammatico, came, on March 22d, under the care of Prof. Gallozzi. About the middle of February he had been stabbed in the upper and inner part of the right gluteal region. The instrument passed obliquely downward and forward. There was much hæmorrhage, from which he fainted; it recurred after the first dressing, but was arrested by perchloride of iron, and cicatrization took place rapidly. About a week after he had left his bed, he began to feel pain extending from the wounded part to the whole of the corresponding limb. The medical man whom he consulted at once detected a large pulsating tumor in the gluteal region, and sent him into hospital. On his admission, Prof. Gallozzi found a vast tumor extending from the crest of the right ilium to the sulcus of the nates, and in a horizontal direction from the middle of the crural arch nearly to the middle line of the sacrum. From the iliac crest to the sulcus of the nates, the measurement was thirty-five centimetres, against twenty-five on the sound side; from the middle line of the sacrum to the anterior superior spine of the ilium, the distance was thirty-five centimetres against twenty-five; and transversely, from the middle of the iliac crest to the anus, thirty-five centimetres against twenty-seven. The skin covering the tumor was unchanged, except at the upper and inner part, where the cicatrix (nine centimetres long by six wide) was seen. On pressure, deep fluctuation was detected; and palpation revealed an extensive pulsation synchronous with the heart's action. On auscultation, an intense blowing sound was heard; both it and the pulsation were arrested by pressure on the abdominal aorta—a process which gave much pain. The inguino-crural region was distended with infiltration of blood under the facia, from the gluteal region to the crural arch. The abdomen was tense; percussion over it gave normal results. The patient complained of pain in the whole of the right lower limb, and of cramps in the upper limb of the same side. His countenance was very pale. He had daily febrile attacks, preceded by short rigors; the temperature during the attacks was 100.75, and the pulse 106. For some days after admission, he had difficulty in passing urine, and constipation. Pounded ice was at first applied, in the hope of arresting the progress of the tumor, or at least rendering it stationary, while the patient was being prepared for operation; it continued, however, to increase. Attempts were also made to compress the abdom-

inal aorta, but were always unsuccessful, on account of the pain which they produced. After fully considering the various methods by which gluteal aneurisms have been treated, and the possibility of their application, Dr. Gallozzi determined on tying the internal iliac artery. An incision in the form of a C, or rather of a horseshoe, was made over the region of the vessel through the integuments and muscles as far as the fascia transversalis; this was torn open with the finger, after a small opening had been made in it on a dilator. The peritonæum was then raised by carefully separating the connective tissue, and the external iliac artery was soon reached. After some further careful manipulation, the internal iliac was seen and felt. The peritonæum, with the contained viscera, was held aside by an assistant (Signor Jennaro) by means of a metallic spatula (a part of Jobert's speculum); this threw the light on the tissues lying deeply in the pelvis, and especially on the part where the internal iliac artery lay. Having ascertained that compression of the artery entirely arrested the pulsation in the tumor, Dr. Gallozzi proceeded to tie it. In doing this, he carefully introduced a small needle (Cooper's), armed with a ligature of three threads, between the vein and the artery, and seized the ligature, when it appeared on the other side, with polypus-forceps. The ligature (which had been placed on the middle of the artery) was then tied. One end was cut off; the other was brought out through the incision. Scarcely a drop of blood was lost. The operation-wound was closed at three points by twisted suture, the lower angle being left free. The patient bore well the operation, which lasted about forty minutes; some spoonfuls of Marsala wine being given to him from time to time. The tumor very soon diminished in size; the pain in the limb entirely ceased. There was no need of wrapping the limb in flannel or other covering in order to maintain its heat, as the circulation in it was not interfered with. On the morning of the operation the temperature of the patient was 102.1, and his pulse 106; in the evening and on the following day, the temperature was 100.2, and the pulse 96; and on the fourth day the temperature was 98.6, and the pulse 70. There was no pain in the peritonæum, nor any trouble in the abdominal region; the pains and cramps entirely disappeared. For the first three days the patient was fed on gelatinous broth with eggs and milk, and had for drink an acidulated solution of quinine; an opiate was given in the evening. Cold was at first applied to the abdomen, but was discontinued, as there were no symptoms of peritonitis. The operation-wound healed favorably, and the ligature came away on the eighteenth day without secondary hæmorrhage. All appeared to be going on well, when, on the fortieth day, it was found that suppuration had taken place in the remains of the aneurismal tumor, accompanied with some fever; and, at the end of May, it became necessary to make incisions. The continued discharge by suppuration of large clots, and the change produced in them by the contact of the air, placed the patient in danger of dying of ichorrhæmia, especially as, through some error in diet, an obstinate diarrhœa set in. The wound in the abdominal wall again opened; and the peritonæum on the one side and the psoas and iliacus muscles on the other were exposed "as if they had been prepared by careful anatomical dissection." This state was accompanied by fever; the temperature being 102.2, and the pulse 160. The diarrhœa was arrested by remedies, and solutions of hyposulphite of soda were frequently and regularly administered; and, on June 27th, the patient was well enough to be sent into the country, where he perfectly recovered his health.

11.—*Rupture of the Bladder in a Woman.* [Dublin Quarterly Journal of Medical Science, February, 1869.]

Mr. M. Collis exhibited at a meeting of the Dublin Pathological Society a specimen of rupture of the bladder in the female, resulting from external injury, a lesion so very rare, that some considered its occurrence as barely possible. The patient, who was a woman of intemperate habits, retired to bed on the night of the 7th September, without relieving her bladder, and got up in the course of the night for that purpose. Not succeeding, she endeavored to get into bed again, but fell across the footboard. She fainted at once, and was lifted into bed, and in the morning complained of inability to pass water, and said that she had felt something give way. On the third day after the accident she was brought to the Meath Hospital in a state of collapse. A large male catheter was introduced, and about half a pint of urine, mixed with blood and clots, drawn off. About the same quantity trickled away afterward, and she voluntarily passed water more than once. She died upon the following day, the fourth from the date of the injury. There was an ecchymosis on the front of the abdomen, where the blow had been received.

Upon examination, *post mortem*, a large transverse rent, which admitted the points of the fingers, and with rugged, irregular edges, was found in the anterior wall of the bladder, which was in a contracted state. This large aperture communicated with a gangrenous cavity of considerable size in the neighboring cellular tissue. There was no communication with the cavity of the peritonæum, which, however, contained a pint of turbid serum, and was inflamed in the vicinity of the bladder. In his remarks on the rare occurrence in the female, of the injury in question, Mr. Collis alluded to the memoir of M. Homël, in which forty-five cases of rupture of the bladder were recorded; five only of these occurred in females, one of them, moreover, being an example of spontaneous rupture.[1] He also alluded to the explanation of the circumstance offered by the late Dr. Harrison, who ascribed it not only to the greater size of the female pelvis, but also to the fact that the distended bladder in the female "does not incline so much backward as in the male; on the contrary, it enlarges more forward, and in the transverse direction; while the uterus and its lateral folds may assist to break the shock of any external violence applied to the hypogastric region, and to prevent the direct concussion of the bladder against the sacral promontory."[2] Mr. Collis alluded to a case recorded by Prof. R. W. Smith in the twenty-fifth volume of the *Dublin Journal of Medical Science*, of a female aged fifty, who, while intoxicated, had fallen across the edge of a tub, and died at the end of five days. The rent in the bladder was very large, transverse in its direction, and situated in the posterior and upper part of the organ, where covered by peritonæum, and different from what occurred in the case before the Society. In conclusion, Mr. Collis drew attention to the few recorded instances of recovery from this formidable injury; one was related by M. Chaldecott, in the *Lancet* (October, 1846); another occurred in the practice of Prof. Syme; a third in that of Denonvillier; and lately a fourth had been recorded by Dr. Thorpe, of Letterkenny.

12.—*Strangulated Femoral Hernia.* By Joseph Bell, F. R. C. S. [Edinburgh Medical Journal, August, 1869.]

Mr. Bell here narrates briefly the history of fourteen cases which had come under his observation, and in which, taxis

[1] Des Plaies et des ruptures de la vessie. Thèse de concours pour l'aggrégation, Paris, 1857.

[2] Dublin Journal of Medical Science, vol. ix.

having failed, recourse was had to operation. Of these cases nine were women, all of whom recovered; five were men, three of whom died, which affords an illustration of the generally-received opinion that femoral is more dangerous in the male than the female subject. The oldest patient was aged eighty years, the youngest twenty-six years. Mr. Bell calls attention to four points in connection with these cases:

1. That in one case only was I able to feel justified in leaving the sac unopened.
2. That in every case where the bowel was not absolutely gangrenous, I returned it, even though peritonitis had begun, trusting simply to opium, and the avoidance of purgatives, to combat the peritonitis.
3. The very satisfactory result in obtaining a radical cure in the case where, after relieving the constriction and returning the bowel, I at once sewed up the neck of the sac.
4. The extreme danger of delay in every case, but more especially in cases when the rupture is of recent occurrence.

13.—*The Propriety of the Removal of Meckel's Ganglion in Neuralgia of the Second Branch of the Fifth Pair of Nerves.* By P. S. Conner, M. D. [American Journal of the Medical Sciences, October, 1870.]

Dr. Carnochan, in his report of the cure of neuralgia of the second branch of the fifth pair, by exsection of the superior maxillary trunk, says that *the key of the operation is the removal of the ganglion of Meckel, or its insulation from the encephalon.*

Dr. P. S. Conner, of the Medical College of Ohio, has, in an able paper, examined this proposition by the lights of anatomy and physiology, and statistics, and arrived at an adverse opinion. He says:

If surgical interference seems necessary, infra-orbital neurotomy ought to precede deep section of the superior maxillary trunk. When pain returns again and again in spite of the various operations performed, an intra-cranial or constitutional cause of the neuralgia may be accepted, and a recurrence of pain must be expected as soon as the patient recovers from the shock of the operation, and the recognized temporary palliative influence of hæmorrhage has passed off. But "neurotomy is not applicable to certain neuralgias of cerebral origin, such as those of which Trousseau has given so good a description under the name of 'Epileptiform Neuralgia;' nor should it be practised if the neuralgia depends upon constitutional troubles, such as rheumatism, syphilis, and the like." [1]

It is in just those cases, however, that are of intra-cranial origin or of the epileptiform variety, that neurotomy after the method of Carnochan will be thought of; for it is such cases that resist other less violent treatment, and such in which *all* curative measures will very probably, Trousseau says very certainly, fail. If the "Carnochan operation" has been performed, and the pain has returned, surgical interference, so far as the second branch of the fifth pair is concerned, has reached its utmost limit. The other trigeminal trunks and the portio dura at its point of emergence

[1] Follin, Traité Élément. de Path. Ext., tome ii., p. 241.

may be divided (Dr. Schuppert's case shows with some hope of producing permanent relief), but the superior maxillary trunk has been removed as far back as it can be reached with the knife. Recourse then must be had to electricity and narcotics, and by one or both, considerably protracted, relief may often be obtained.[1] As experience has shown that similar relief may frequently be secured by the same means without any precedent operation, the latter should be performed, if ever, only after the most thorough trial of every other recognized means of treatment has failed to secure relief; and when the superior maxillary trunk is exsected back to the foramen rotundum, the "removal of Meckel's ganglion or its insulation from the encephalon" cannot on either anatomical or physiological grounds be considered of importance, much less the "key of the operation."

Of the anatomy he writes:

The spheno-palatine ganglion receives sensitive fibres from the second branch of the fifth pair, motor from the seventh, sympathetic from the carotid ganglionic plexus. It sends out branches to the mucous membrane of the nose, palate, and pharynx, to the levator palati and azygos uvulæ muscles, to the musculo-fibrous capsule surrounding the eyeball and its striated muscles, and to the walls of the internal maxillary artery and its branches.

With regard to the physiology of the ganglion, little is known with certainty, and there is much diversity of views not only as to its office, but even of its nature; whether it is allied to the spinal or sympathetic ganglia. The weight of authority is in favor of its being more allied to the sympathetic than to the spinal. Moreover, it is not always present, hence it is not an essential part of the sensory nervous system. It is quite certain that Meckel's ganglion cannot exert the exaggerating influence claimed for it, and, "if, as Alcock[2] maintains (and there is good anatomical ground for him to rest upon), it does not belong to the fifth pair, but is merely connected with it, in what respect can it be considered the 'key of the operation,' or of what advantage can it be to remove or isolate it, except in cases of neuralgia, resulting from disease of or pressure upon the nerve-fibres in the palatine canals, or the nasal and palatine mucous-membranes; and in these cases only because it is so connected with the sensitive trunk of the nerve-fibres, that section of the latter must necessarily separate it from the encephalon so far as its sensitive root is concerned?"

The exsection of the superior maxillary nerve back to the foramen rotundum would only be thought of in the most aggravated form of this neuralgia, particularly in the epileptiform variety. But these cases, in which the operation might seem justifiable, are the very ones in which, from the cause of the neuralgia, there is little or no prospect of any other than very temporary relief. If it were local disease of the

[1] As, for example, in the case operated on by Billroth, and reported by Wiesner (No. 9 above).

[2] Cycl. Anat. and Phys., vol. ii., p. 285.

infra-orbital nerves or its branches that was the *fons et origo mali* there might be good reason for the exsection of the nerve, from before its entrance into the infra-orbital canal. But notwithstanding the enlarged and congested nerve-trunks that have at times been removed, in at least the great majority of cases, the real cause of the neuralgia is either constitutional or of centric origin. If permanent relief followed the operation, it would little matter whether the lesion were peripheral or central. But if it is a fact that the relief is only temporary, and in a considerable proportion of cases of not longer duration than the intermissions secured by less formidable operations, then it becomes a serious question if the "Carnochan operation" is not an "act of desperation." The clinical record of this operation seems to support this view:

1. Carnochan. "Entirely free from neuralgic pain" at date of report, *fourteen months* after operation.

2. Carnochan. "Free from pain" *two months* after operation.

3. Carnochan. "Progressing favorably" *twenty-eight days* after operation.

4. Weinlechner. "Result *dubious*."

5. Nussbaum. "Pain had entirely ceased up to time of publication," *several months* after the operation.

6. Wagner. "Recurrence of pain after *three months*."

7. Schuppert. "The pain returned, and before I finally succeeded in relieving the sufferer permanently I performed several other operations, tying the carotid artery and resecting the facial nerve at the foramen styloideum. It is now over one year since I performed the latter operation, and the man has never since been afflicted with the slightest pain."

8. Schuppert. "After the lapse of *several years*, no return of the pain has taken place."

9. Billroth. Pain recurred in about *six weeks*.

10. Blackman. Pain returned in *sixteen months*. At times as severe as before operation.

11. Mussey. "While relieving greatly, it did not release me from suffering, until a section of the inferior dental nerve was taken out. After this for quite four months I enjoyed perfect immunity from pain. The pain returned again, and has been constant ever since." The second operation was performed three and a half months after the removal of Meckel's ganglion.

12. Podrazki. Pain *very soon* felt in the supra-orbital branches. Supra-orbital trunk exsected in its course along the upper part of the orbit, *eleven days* after first operation. Pain had not returned *fourteen days* later.

13. Foote. Pain returned in *three months*. As yet of moderate severity.

Whole number of operations	13
" " in which pain is known to have recurred	7
Of these *seven* the return was—	
at time not stated (No. 7)	1
within *one month* (No. 12)	1
within *two months* (No. 9)	1
in *three months* (Nos. 6, 13)	2
in *eight months* (No. 11)	1
in *sixteen months* (No. 10)	1

Of the *six* in which return of pain has not been reported, the history is known for—

"*several years*" (No. 8)	1
"*several months*" (No. 5)	1
fourteen months (No. 1)	1
two months (No. 2)	1
twenty-eight days (No. 3)	1
The result was at time of report "dubious" in (No. 4).	1

Granting that, in all the six cases in which we have no knowledge of return of pain, there was no such return, the operations were successes, and the neuralgia was in each *permanently* relieved by the exsection of the superior maxillary nerve back to the foramen rotundum; yet in at least fifty per cent. of the operations the freedom from pain afforded did not continue a year and a half. It may with propriety be supposed that the percentage of failures much exceeds the fifty per cent. just stated. In accepting as successful cases all in which the result of the operation has not been fully given, we cannot certainly be accused of a want of liberality. Is a few months' freedom from pain to be considered indicative of the success of the operation, and is this operation the only means by which such freedom has been or can be secured? In Stromeyer's opinion, "fourteen months is no success;" and there are numerous cases on record of prolonged relief secured by medical treatment, and by section of the nerve in the infra-orbital canal, or just external to it. For example, Fothergill reports[1] (and reference is made to his case not so much because of the length of time as because of the connection that his name has with trigeminal neuralgia) at least a year's relief secured in a "most obstinate" case by the persistent use of the "ext. hemlock." Again, Wagner[2] secured not less than fourteen months' relief in at least eight cases by excising portions of the infra-orbital nerve, varying from eleven to eighteen and a half lines in length; in five of these eight the relief being for at least two and a quarter years. Patruban, by excising three-quarters of an inch of the nerve in the infra-orbital canal, procured fifteen months' relief for the patient upon whom Podrazki afterward operated (No. 12 above).

Prof. George C. Blackman, in the same journal, reporting the sequel of his case, mentioned above, writes of four cases:

Of four cases in which to my knowledge exsection has been performed by other surgeons in Ohio, but one remains free from pain, and in this case only some three or four months have elapsed since the operation. I am informed by Dr. Carson, of Middletown, that in his case the patient was relieved for one year.

14.—*Excision of the Tongue for Epithelioma.* By J. T. Gilmore, M. D. [From Report on the Surgery of Mobile, Alabama, for the Year 1869.]

During the month of August last, a gentleman from the interior of Mississippi, Mr. High by name, came to this city seeking advice for an ulcer that occupied the left portion of the tongue, in size as large as a silver half-dollar. The disease extended far back upon the organ, occupying the entire arch. The ulcer was excavated, and would contain at least a dessert-spoonful of fluid in its cavity, and was surrounded by an induration characteristic of its nature. His history, as given to me, was that he was

[1] Elliott's Fothergill's Works, 1782, p. 436.
[2] Schmidt's Jahrbücher, B. 146, p. 64, *et seq.*

by profession an apothecary, and up to the previous Christmas had been in possession of uninterrupted health, being now in his fifty-fifth year. At the time mentioned, his attention was attracted by a slight soreness experienced from the movements of his tongue, and examining carefully, he found a small lineal crack or fissure situated near the left margin, on the dorsal surface, opposite the last molar tooth. As it did not disappear after using several simple applications that occurred to his mind, he consulted a physician, who applied solid nitrate of silver several times weekly. Under the influence of this application the ulcer rapidly enlarged, until it attained the dimensions designated above. His physician, recognizing his malady as malignant, advised him to place himself under my care. When he came to the city, before consulting me, being very timid, he thought it prudent to ask the advice of several prominent physicians, who advised him adversely to operative interference. But at our first interview I told him that the operation was feasible, and judging from the experience of Mr. Paget, as recorded in the London *Times and Gazette*, of February 10, 1866, that the risk in his case would be trifling. At this time the flow of saliva was very great, and he suffered intensely. The pain was mostly confined to the temporal region. His general appearance exhibited emaciation, and his vital powers were evidently fast yielding to the ravages of his disease, and the effects of his mental agony and physical suffering. I at once proposed removal, as advised by Paget, with the écraseur. This his timidity caused him to decline, and, knowing there was no other mode through which he could be relieved, I replied, "I have nothing more to offer." I saw nothing more of him for nearly two months, when he again made his appearance at my office. The disease was steadily and rapidly progressing. A peculiar fact was observed in his case which he himself ascertained, viz.: that his pain was allayed more effectually by filling the ulcer with quinine than by any other local application. He occasionally visited me at my office, until the first day of January. By this time the disease had extended as far down as the tongue was visible. It had also involved the superficial portion of the left tonsil, and the anterior half arch on the same side; and at this stage of the disease, deglutition, even of fluids, was accomplished with difficulty, and the effects of inanition were growing very manifest. His starving condition forced him to inquire whether or not an operation was possible. By passing the finger down into the pharynx behind the tongue, I ascertained that the removal of the organ down to the hyoid bone, the removal of the left tonsil, and the diseased half arch would at least for a time, if successful, rid him of the disease. There was no enlargement of the cervical glands. I stated to him that I would undertake an operation, if he requested it, after fully appreciating the hazard attending it, augmented by his physical condition at this time, being bent over and worn out by hunger and pain. The disease had penetrated into the substance of the tongue so deeply that I determined to do a modified operation of Prof. Syme, recollecting his famous case. In the presence of the class at the City Hospital, on the 22d day of January, 1870, I removed the entire structures. By carrying an incision down through the central portion of the lower lip to the upper border of the hyoid bone, and then carefully separating the genio-hyoid muscles, I introduced a chain-saw through this separation, and, after extracting one of the central incisors, the symphysis was readily divided. I then detached the genio-hyo-glossi muscles from the jaw, and, seizing the tongue with my Musseux forceps, pulled it forward and upward. I then passed my finger between the tongue and mylo-hyoid muscle, carrying it back until I arrived at the anterior portion of the middle constrictor of the pharynx, and on my finger I passed a curved needle, carrying the chain of an écraseur, pushing it through the constrictor into the pharynx. I then effected the

same separation of the organ on the other side, and introduced on the point of my index-finger the needle at a corresponding point, and brought the chain out at the central incision, thus completely encircling the tongue at its base, then with a scalpel I liberated it laterally from the body of the inferior maxillary bone, and removed the diseased half arch and tonsil, and carrying my incision around the tongue until the chain was reached, and then following the advice of Chassaignac, operating with his instruments, I effected the separation of the organ by tightening the chain one notch every two minutes. The operation consumed something over half an hour, the loss of blood being trifling, not exceeding half a teacupful. After the removal of the écraseur there was a slight hæmorrhage from the left lingual artery, which was ligated. The separated bone was then approximated and wired together with a silver wire passed through perforations made in each half with Hamilton's drill, near the cut surfaces of the bone, below the course of the dental foramen, the ends of which, after being twisted, were left hanging out beneath the chin, and the contiguous teeth were also fastened by a silver wire passed around them. The operation was borne without shock, and was not followed by febrile reaction. In twenty-four hours the patient expressed himself as entirely comfortable. His recovery has been uninterrupted, save by some troublesome exfoliation of bone occurring from the wire passed through the perforations. It would have been better to have relied on the ordinary cup-splint, aided by an internal splint as practised by Mr. Syme, in his case. My experience in this case convinces me that extirpation of the tongue is as justifiable as any other operation for cancer. In examining the literature of this operation, I find that Prof. Gross speaks of it as a "remarkable feat," that has been performed several times in Europe. Erichsen, in his article on tongue diseases, condemns operative interference when the disease penetrates so deeply as to affect the floor of the mouth. Holmes speaks of one case, by Chassaignac, of entire removal with écraseur introduced between the genio-hyoid muscles, passed over the dorsum, then in front to separate the genio-hyo-glossi muscles; one case of separation with ligature, by Mr. Nunnely; one by Mr. Syme; and two by Mr. Fiddes. By all these authorities the operation is discountenanced. Indeed, I was surprised at the manner in which Mr. Paget speaks of the operation in the article referred to. He says: "The motive to operate here, as in other cases, is either to prolong life, or, without shortening, to comfort what remains." For the first, I believe there is some advantage, not a great prolongation of life, yet enough to justify an operation which is attended with very little suffering or risk. But the chief motive is in the hope of comfort; and the comfort that may be gained is in many cases so great as to justify a greater risk of life than is incurred in any ordinary operations, for removal of cancer of the tongue. The risk is really very small. I have not had a fatal case, or witnessed one. There are few of even the minor operations of which I could say so much; and the comfort given is, that the patient is delivered for the time from all the misery of one of the most distressing and disabling conditions of disease, and, until the cancerous growth is renewed, may enjoy complete health and do all his work. For the method of operating the choice lies between cutting and the écraseur. Caustic is not to be thought of unless in a case of the smallest extent; and the cases in which the ligature should be used must be extremely rare. I have never employed it; for the only advantage which it offers (that of avoiding hæmorrhage) is just as well, and much less offensively, obtained by the écraseur. The risk and troubles of hæmorrhage are, however, much overrated, and I believe the knife may be preferred to the écraseur in all but the largest operations, such as those for the removal of the entire tongue. In looking over my journal of literature upon this subject, I find one case

operated upon by Christopher Heath; one by Dr. Fenwick, of Montreal; five cases by Mr. Nunnely, reported in the *British Journal*, for November 5, 1866; seven others by his peculiar method described in the London *Lancet*, 1869. After performing my operation I received the January number of the London *Lancet*, containing the report of a case by Mr. Reid, of the Geelong Hospital, Victoria. He divided the symphysis, it seems to me, to do what could have been accomplished through the mouth as advised by Mr. Paget. In my case the disease could not have been removed by carrying the chain over the dorsum of the tongue even after the division of the symphysis, for the disease had penetrated so deeply that every thing above the elevators of the hyoid bone had to be removed. Nor was it a case for Mr. Nunnelly's peculiar method, for it was necessary to make a clear dissection of the left tonsil. To sum up the experience with the result of those cases which the material at hand enables me to know, the operation is comparatively a safe one. Paget sustains it in two cases, Syme one, Fiddes two, Nunnely twelve, Heath and Fenwick each a case, Reid and McGillveray, number not mentioned. Mr. Syme seems to have led the way in popularizing the operation, and, judging from Dr. Gross's declaration, continued in the third edition of his Surgery, published in 1864, no successful cases had been operated upon in this country up to this time.

Miscellaneous and Scientific Notes.

The Famous Carlisle Life-Tables are well known to all concerned in life assurance. They were formed on the vital statistics collected and arranged by the late Dr. Heysham, a celebrated physician of Carlisle, who died a little while ago, at a very advanced age. His life has recently been written by Dr. Lonsdale, and published in a very costly volume. He is described thus by a contemporary: "How noteworthy a figure he was—how lusty, vigorous, and well-chiselled his character and life! There stands the man—'a three-bottle man,' a hearty liver, a vigorous politician, a laborious statist, an enlightened practitioner, an unaffected philanthropist, an eccentric magistrate, the friend of Paley, Milner, and Law, a man to be liked and relished.'"

The Health of Paris.—The *British Medical Journal*, for October 29th, has a Paris letter, *par ballon monté*, which says that the health of Paris, under the circumstances, is remarkably good, with the exception of the prevalence of small-pox among the *gardes mobiles* from the provinces. There was no scarcity of food, though butcher's meat was distributed in rations, the quantity allowed to each adult *per diem* being 100 grammes, a family of five, say, getting about one pound.

Horse-flesh is given without stint, for from 30 to 36 cents (gold-rate) per pound. Beef, mutton, and milk, were at fair prices fixed by the Government (?). Milk at famine rates, and vegetables very dear. The American ambulance (field hospital) is styled a model institution.

The Influence of the Doctrine of Infinitesimal Doses on Legitimate Medicine.—Mr. Robert Hamilton, in an address delivered before the Liverpool Medical Society, referring to the doctrine of "infinitesimal doses," remarks that it is not nearer verification than when first propounded by its author nearly fifty years ago. And, speaking of the asserted influence of homœopathy on legitimate medicine in lessening the amount of drugs given, says: "But would it not be truer reasoning to point out how greatly the homœopaths have retarded the advance of true science, and, by the substitution of a sham, prevented the proper position of drugs, as a part of therapeutics, being found? The more humble place which in future the *materia medica* will hold in relation to medicine will not be due to homœopathy, but to that large host of searchers after truth, not one of whom is to be found in homœopathic uniform."

Elizabeth Garrett, M. D., and Prof. Huxley, are candidates for the London Education Board for the parish of Marylebone. Both candidatures are warmly approved by both the medical and scientific journals of London.

Case of Quadruplets.—Dr. J. W. Miller, of Dundee, Scotland, reports in the *Edinburgh Medical Journal*, for October, the following rare case:

On June 6, 1870, about 2 P. M., I was called to Mrs. W. M., in her fifth labor. Her pains had commenced early in the forenoon. Her last menstruation occurred about the middle of October, so that she was now about the middle of the eighth month of her pregnancy. She was very big, and for a month or two back had been "very frail," and had suffered from considerable œdema of the lower extremities. At 2.30, the os was almost fully dilated and the membranes protruding. The pains were languid, and after a dose of ergot, at 3.15, I ruptured the membranes. The head presented. A male child was quickly expelled at 3.30. I had barely time to tie the cord and remove the child, when a second bag of membranes protruded at the vulva. These having been ruptured, the breech of a second child was found presenting. I extracted it

easily, about three minutes after the first; it also was a male. A third bag of membranes came almost immediately outside the vulva, and burst spontaneously with a great gush of liquor amnii. The feet presented, and the third child, a female, was extracted about five minutes after the birth of the second. On passing the hand over the abdomen the uterus was found still large, and examination revealed a fourth bag of membranes, which I ruptured. The head presented. The uterine contractions being very feeble, I administered another dose of ergot, with about a glass of whiskey, but the head continued to make very slow progress. The patient being rather exhausted, and moreover somewhat panic-stricken under the very extraordinary nature of the event, I sent for the forceps, and with one blade over the occiput scooped out the head. This child was born at 4.10, about half an hour after the third; the delivery of the four children thus being completed in about forty minutes. The first three were born in a fairly vigorous condition; the fourth was dead. One of the placentæ was single, and came away almost immediately; the other three were in one large mass, and were extracted about ten minutes after the birth of the last child. The uterus contracted well, and there was no hæmorrhage. The patient's pulse was 70, and of fair strength. The female child died during the ensuing night. At my visit next day one of the others seemed to be dead, revived a little toward evening, but died during the night. The other, and last, died next day. I was allowed to weigh two of the children, and found each to weigh about 3¼ lbs.; the four together would weigh about 13 lbs.

The mother for a few days had considerable œdema of the face and legs, but this quickly disappeared, and she made an excellent recovery.

The *Lancet*, November 5th, states that the Princess Louise, whose approaching marriage with the Marquis of Lorn has excited so much attention lately, is suffering from the same disorder which two years since afflicted the Princess of Wales—an irritation of the knee-joint, the result of a strain and over-exertion. Prof. Lister, of Edinburgh, had visited Balmoral professionally in the case.

The Obstetrical Lectures at Bellevue.—Prof. George T. Elliot, being incapacitated, by his illness, from delivering the lectures during the present session, the course has been given by Prof. James P. White, M. D., of the Buffalo Medical College.

We need not say that the utmost satisfaction has been manifested on all sides with the success of Prof. White's labors. The subjoined correspondence, however, will convey a better appreciation of the estimate put upon his magnanimous act, than can be expressed by any words of our own:

BELLEVUE HOSPITAL MEDICAL COLLEGE,
FOOT OF TWENTY-SIXTH STREET, EAST RIVER,
NEW YORK, *November* 9, 1870.

PROF. JAMES P. WHITE—

MY DEAR SIR: I have been directed to respectfully request you to name a day when it will be agreeable for you to meet our Faculty at dinner. We are anxious to have an opportunity of meeting you socially, as a Faculty, to express our appreciation of your noble and generous act, which has given us the advantage of your large professional experience and wide reputation, in our course on Obstetrics. With sentiments of the highest esteem and respect,

I remain your obedient servant,

A. FLINT, JR., *Secretary.*

FIFTH AVENUE HOTEL, *November* 11, 1870.

MY DEAR DOCTOR: Your kind note, requesting me "to name a day when it will be agreeable for me to meet the members of the Faculty of Bellevue Hospital Medical College at dinner," is received.

One of the inducements in accepting your invitation to supply the place of Prof. Elliot, was the pleasure anticipated, during a brief absence from home and its pressing cares, in the society of the gentlemen composing the Faculty, for each of whom I entertain the highest respect and admiration. It therefore affords me great pleasure to accept your hospitable invitation, and I would name Wednesday the 16th inst., if agreeable to yourself and our *confrères*, as the time most convenient to myself.

Thanking you most sincerely for the complimentary language in which your note is couched, and wishing to express through you my grateful appreciation of the considerate attention thus extended to me by the Faculty,

I remain your friend and servant,

JAMES P. WHITE.

Prof. AUSTIN FLINT, JR., M. D., *Secretary, etc., etc.*

Reception of Sir James Simpson's Successor by the Medical Class of the University of Edinburgh.—The induction of Dr. Alex. Russell Simpson into the chair of Midwifery at Edinburgh, on the 2d November, was the occasion of a riot. Our readers will remember that, at the time of his appointment, considerable dissatisfaction was felt at the decision of the electors. But the modes in which that feeling found expression were at

least legitimate compared with the lawless behavior of the Edinburgh students on Wednesday. That afternoon Prof. Simpson, accompanied by the principal, Sir Alexander Grant, Prof. Christison, and several other members of the Senatus, as well as the Town Councillors, entered the chemistry class-room, but were forthwith received with a perfect whirlwind of hissing, howling, cock-crowing, throwing of pears and crackers, etc. The professor stood at his desk for a considerable time, endeavoring to get a hearing, till at length the Principal rose, and expostulated with the students on their riotous behavior. His intercession, however, produced small effect; the din again grew fast and furious, and was increased by one of the ringleaders shouting through a grating on the roof. Here, however, he was caught, and taken into custody. At last Prof. Christison rose, and his great popularity with the students procured immediate silence. He said that since he first entered the University, in 1811, he had never witnessed such a disgraceful scene as that before him, and appealed to the students to conduct themselves like gentlemen, were it only for their own interest, to say nothing of the credit of their Alma Mater. The effect of their proceedings, when they came to be reported, would be most injurious to Edinburgh. If a fair hearing were not accorded to Dr. Simpson, he would advise that gentleman to stop his lecture, and confine himself to his own students in his own class-room. A brief pause in the hubbub then ensued, but Dr. Simpson had not proceeded far when it again broke out, and continued at intervals to the close. He then left the room amid a volley of hisses.—*Lancet, November* 5, 1870.

Sulphate of iron has been very successfully employed as a disinfectant of all discharges from the patients of the hospital, and it has been regularly put into the latrines, etc. This salt has the advantage of cheapness, as well as most undoubted efficiency. It is extensively made in some parts of China by mixing together small coal and iron pyrites, covering over the mass very securely, and allowing decomposition to take place. After the violent chemical action has ceased, the mass is broken up, dissolved in boiling water, and crystallized out in shallow vessels. It is used in various chemical processes, such as the making of the beautifully-crystallized K'ing Fen, or calomel, produced by chemical manufacturers in Hankow, but ingeniously adulterated with selenite. Diluted iodine tincture, and the ethereal preparation of iodine, have been found the best disinfectants and stimulants for unhealthy surfaces.—*Annual Report of the Hankow Medical Mission, by F. Porter Smith, M B*

Edinburgh Infirmary.—The managers of the Royal Infirmary at Edinburgh have refused to admit female medical students to the wards. The same body have just appointed a committee to decide whether beds can be set apart for Dr. Thomas Keith, so as to enable him publicly to perform the operation of ovariotomy with which his name is associated. Dr. Keith, it appears, has for many years kept up, at his own expense, a hospital for the performance of that operation, which he has achieved in one hundred and one cases with signal success. —*Lancet.*

Pathology of Leucæmia Lienalis.—Dr. Hofmann, in a paper on this subject in the *Wiener Medizinische Wochenschrift*, from a careful examination of the urine, and especially of its coloring matter, appears to have demonstrated that in this affection there is not only a diminished formation, but an increased disintegration, of red corpuscles—at least if the coloring matter of the urine is to be considered as a derivative of that of the corpuscles; if not, it must proceed from some other substance having strong coloring capacity.

The Sayre Malpractice Case.—We have already referred to this case in a somewhat pointed manner, and our remarks have been copied approvingly in the English journals. The importance of the principle established by the decision of the Court, however, induces us again to call attention to it, which we do by copying from the *Citizen*, of this city, the following note, which sums up the whole case very succinctly:

Dr. Lewis A. Sayre, the well-known surgeon of this city, has just succeeded in bringing to a close a suit against him for alleged malpractice, and vindicating his reputation triumphantly against the slanders sought to be cast upon it. It seems that a mother brought a child to him, suffering, as was supposed, from hip-disease. This idea the doctor quickly ascertained to be an error, and with his accustomed promptitude he opened the swelling, which proved to be a scrofulous abscess, and discharged the matter. The child, however, began to cry; the mother became frantic, carried it away at once, and failed to bring it back, as she was directed, for subsequent treatment; it was unhealthy, and the sore remained open several months. The attending physician, an ignorant pretender who could not answer the simplest questions in anatomy, started the foolish charge that Dr. Sayre had punctured the hip-joint and let out the synovial fluid which lubricates that important articulation. Other doctors were induced by misrepresentation to accept

this view rather hastily, and a lawsuit was the consequence. The absurdity of the charge, however, was made so manifest on the trial that the plaintiff's lawyer practically abandoned the case.

So far so well, and we were pleased to receive a copy of the testimony and proceedings, which the defendant has caused to be printed in pamphlet form, and to observe how clearly he had freed his skirts from the damaging accusation. That was, however, mainly a private concern of Dr. Sayre, and only interested us as one of his friends. The point of public importance is, that in the course of the suit a new precedent was established. The defendant demanded that the child should be subjected to a personal examination by experts, as access to it had been denied. This application was strenuously resisted, but was finally granted in an able decision rendered by Judge Jones of the Supreme Court. He reasoned from analogous cases, such as alleged impotence or pregnancy, and traced back the origin of bills of discovery, and placed this upon the same footing. His ruling, in this instance, is one of the greatest advances in jurisprudence made by the Court during half a century, and will do much to discover the truth and to prevent malicious attacks upon medical men. It puts an end to pretended injuries and trumped-up sufferings which disappear as soon as the trial is over and the damages secured. Dr. Sayre deserves the thanks of his medical associates for securing this result, and for the vigorous way in which he defended this case, and so helped to discourage groundless and extortionate actions.

The *British Medical Journal*, in commenting upon this case, reproves very sharply the action of several of the physicians engaged in this case, and indorses most heartily our own comments made several months since.

Transatlantic Courtesies.—Under this title, the *Lancet*, of October 29th, thus comments on the suit brought against Dr. Sayre for alleged malpractice:

We have been favored with the receipt of a pamphlet containing some 190 pages of small type, wherein are set forth particulars of a suit instituted against Dr. Lewis A. Sayre, of New York, for alleged malpractice. Two other well-known surgeons are said to have stated that an opening made in the gluteal region of a child (the subject of the action) communicated with the joint, and that synovia had escaped. But the sum and substance of all worked itself into the fact that Dr. Sayre had diagnosed a chronic abscess, had immediately opened that

abscess, and had incurred the grave displeasure of the mother in so doing. Thereupon the action was brought, a verdict in favor of Dr. Sayre was recorded, and the plaintiff was ordered to pay an extra allowance of one thousand dollars, in addition to the ordinary costs of the suit. We call attention to this trial for the purpose of congratulating Dr. Sayre. The courtesies of the profession appear to need cultivation in New York, as well as on this side of the Atlantic.

Prof. Willard Parker has resigned his chair of Surgery in the College of Physicians and Surgeons of this city, and is succeeded by Prof. Markoe, formerly Adjunct Professor of the same branch. Prof. John T. Metcalfe also retires from the chair of Clinical Medicine in this institution. We also learn that Dr. F .N. Otis will lecture this winter for Prof. Bumstead, whose health will not permit him to undertake the course during the present session.

Enlargement of the Long Island College Hospital.—The Regents of the Long Island College Hospital, finding their present accommodations insufficient for the growing demands of the city, have contracted for the erection of a new wing to the present hospital buildings, to be completed and ready for the reception of patients by the first of the February ensuing.

The new building will occupy nearly the entire south front of the present hospital grounds, on the corner of Henry and Amity Streets. It will have a frontage of one hundred and forty-eight feet on Amity Street, by thirty-two on Henry Street, and is to be three stories high.

The basement rooms will be occupied mainly by the *attachés* of the hospital. It will also contain a library and reading-room for patients, the rooms to measure fifty feet by eighteen. The second and third stories will be occupied principally as hospital wards proper, and will be thoroughly ventilated and lighted, and also supplied with water-closets, etc. Each room is to be thirty by fifty feet in dimension.

In erecting the eastern portion of the new wing, the opportunity has been embraced of improving the facilities of the College by the construction of a new Amphitheatre and operating-room, forty-four by thirty feet, and twenty-eight feet high. This will be arranged according to the most improved models of such rooms, and will seat for the present about two hundred and fifty persons. It can, however, be readily enlarged, when necessity requires it. Immediately in connection with the amphitheatre, there are several private rooms set apart for medical gentlemen connected with the college and hospital. The

entire building is to be constructed on the most improved principles of modern hospital structures.

The enlargement of the Long Island College Hospital appears to be demanded by the growing necessities of the part of the city in which it is located. In close proximity to the immense shipping interests of New York, and to the numerous factories and machine shops which crowd the southwestern portion of this city, this hospital is of easy access in all cases of sudden injuries, where many of the sufferers in such cases would die if removed to points more distant.

Two years ago the Regents felt impelled, by the constant demands made upon them, to erect a new wing for a lying-in department, and for the treatment of diseases of females. This was done upon the north side of the grounds, fronting on Pacific Street. The new buildings, now in process of erection, will be somewhat similar in construction, but greater in capacity, and when finished will add greatly to the appearance of the hospital grounds, and to the capacities of a noble charity.

The hospital grounds comprise fourteen full lots, extending on Henry Street from Pacific to Amity Street, and are elevated above the surrounding region, with the rear fronting on the New York Bay.

Connected with the hospital there is also a dispensary for the poor, which treats between eight and ten thousand patients a year.

Locality of the Sense of Taste.—Dr. Camerer gives, in the last number of the *Zeitschrift für Biologie*, the results of his experiments on the locality of the sense of taste. He finds that the sensitiveness of different parts of the tongue depends essentially on the presence and number of the fungiform papillæ. These are most abundant near the apex of the tongue; they are less numerous at the edges of the organ, and disappear near the circumvallate papillæ. There are no papillæ on the under surface of the tongue. The mode in which Dr. Camerer conducted his experiments was to press a tube of about a third of an inch in diameter over different parts of the tongue and adjoining mucous membrane, and then to pour in a solution of the sapid substance to about the height of a quarter of an inch. Nine persons were experimented on, and the subject of the experiment did not in any instance know beforehand the nature of the solution, the taste of which he was called upon to determine. The substances employed were common salt, sulphate of quinine, sugar, and sulphuric acid. From his experiments it appears that the parts of the tongue that are free from papillæ possess no sensibility; also, he finds that a weak solution of a salt is more readily per-

ceived after pure water has been tasted than after a strong solution has been tasted during the previous twenty-four hours. By touching the fungiform papillæ with a fine spiculum of salt-crystal, he was able to show that the gustatory sensibility resided in the fungiform papillæ themselves, and not in the adjoining mucous membrane.—*Lancet.*

The Public Health in England.—The Registrar-General's quarterly return of deaths for the three months ending 30th September, exhibits an unsatisfactory state of the public health. The mortality was nearly 2 per 1,000 in excess of the average for the season, and it is worthy of note that the country and small town districts appear in a more unfavorable light than the larger town centres of population. The increased mortality is ascribed mainly to the prevalence of diarrhœa and scarlet fever. From the former of these causes 17,647 and from the latter 7,498 deaths were registered; while of different types of fever 4,635, of whooping-cough 1,712, of measles 1,390, of diphtheria 581, and of small-pox 500, fatal cases are stated to have occurred. Scarlet fever seems to have permeated almost every nook and corner of the land, and, in view of the fact that during the three-quarters completed of the present year not less than 20,000 fatal cases have been already returned by the registrars, there is but too much reason for supposing that the aggregate scarlatinal fatality of the year will equal, if it does not exceed, that of either 1858 or 1863—the two years of severest prevalence of the disease on record.—*Lancet.*

Solvent for Ear-Wax.—Dr. Pétrequin, of Lyons, has published, in the *Bulletin de Thérapeutique*, the results of a large series of experiments made by himself to determine the best solvent for cerumen. He comes to the conclusion, after trying very many different agents usually recommended for this purpose, that simple tepid water is the most efficacious and least irritating.

The *Lancet* of October 15th has an able leading article reflecting very severely on the noisy and self-asserting school of would-be reformers, who evidently consider themselves afflicted with a mission to convince the world that the birth of children is a source of national weakness. In this article the ground is taken that no small share of the disorder and disaster that are now reigning in unhappy France may be traced

to the perversion of the sexual instinct which so eminently characterizes that people. "Alternations of vituperation and panic," it says—and how pointedly this expresses the predominant features of the Frenchman of to-day!—"are natural enough in a people who for three or four generations have used the relations of the sexes chiefly as a means of stimulating and gratifying lust; and whose nervous organizations have been unstrung by their habitual recourse to unnatural and demoralizing practices."

Fungous Food.—There was a show of fungi last week at the Horticultural Gardens, which was attended by a large number of visitors. Many of these doubtless learned for the first time that the swift-growing ephemeral vegetation familiar to them in the autumn woods deserved a very careful recognition, and found that their merits could not be exactly summed up by dividing them into "mushrooms" and "toadstools." According to Badham, there are thirty species of esculent fungi in England. The only kind which we ordinarily eat, the *Agaricus campestris*, is thrown away in Italy as unfit for food; and we, in our turn, kick down and destroy the *Agaricus prunulus*, the most delicious of all, and the kind to which the French title "mousseron" (whence our word "mushroom") was originally applied. Nor does the *Agaricus oreades*, the "champignon," so extensively eaten all over the European Continent, fare much better with us. Ninety-nine times out of a hundred it is denounced as a toadstool, and shivered by a blow of a stick, or crushed under the heel with disgust. There must be many tons of good, nutritious food thus wasted annually in England, for want of the knowledge to discriminate the esculent from the poisonous fungi. When we remember the weary and profitless lectures often delivered by professors of botany to medical students, it seems very wonderful that no attempt is ever made to enlighten the class upon what would really be useful information—the selection of esculent fungi. If medical men generally were acquainted with the subject, they might readily spread this knowledge throughout the community, and receive the thanks, not only of the poor, who would be the gainers of many a cheap and savory meal, but of the gourmand, whose existing resources for palatal enjoyment would be somewhat largely increased. —*Lancet.*

A Card from the Long Island College Hospital.—It has recently come to our knowledge that a *quack advertisement* has

been distributed under cover and stamp of the Annual Circular of the Long Island College Hospital.

The Regents and Faculty of the College embrace the earliest opportunity to state that this was done without their knowledge, and after the circulars had been committed to the news-agent for distribution.

They deeply regret the necessity for publishing this card; but duty to themselves and the profession requires that this statement be made public.

J. J. Van Nostrand,
President Board of Regents.
S. G. Armor, M. D.,
Dean of the Faculty.

Death of Thaddeus M. Halsted, M. D.—At a stated meeting of the New York Medical and Surgical Society, held on the 8th instant, Dr. Adams announced the decease of Thaddeus M. Halsted, M. D., as having occurred during the summer recess, and stated, as a remarkable fact, that but four deaths had occurred in the Society since its organization in 1836. Drs. Adams and Buck were appointed to prepare a minute in connection with this event.

On the 22d instant the committee reported the following resolutions, which were ordered to be entered on our minutes, and a copy thereof to be transmitted to the family of the deceased:

Resolved, That the New York Medical and Surgical Society do enter upon their records the recent death of Thaddeus M. Halsted, M. D., for a long series of years an active and valued member. In discharging this melancholy duty, your committee cannot do justice to their own feelings, nor to the memory of the departed, without bearing testimony to the loss which this Society has sustained in the removal of one so beloved as a man, so greatly respected as an honorable and successful practitioner, and so sincerely devoted to the interests of our Society. Ever kind and genial in his spirit and intercourse, highly conservative in his views and influence, in his official trusts diligent and self-sacrificing, he was an honored member of an honorable profession, and has left a void in our number which is deeply lamented.

We desire, also, to express our sympathy with the bereaved relatives of the departed, and we recommend that one of our number be appointed to prepare (in accordance with our usage) a memoir of the life and character of the deceased.

Resolved, That these proceedings be published in the medical journals of this city.

Death of Prof. Matthiessen.—This young chemist, of great promise, committed suicide, by taking prussic acid, recently in London. He was one of the examiners of the University of London, and Lecturer on Chemistry at St. Bartholomew's

Hospital. By the original work he had already done, he had acquired a high reputation.

Last year the Council of the Royal Society awarded him the Royal Medal for his researches on the "Electrical and other Physical Properties of Metals and their Alloys." Over-mental strain is the cause assigned for the act. Dr. Matthiessen was in his thirty ninth year.

Count Moltke, aged 70.—The most potential man in the world just now is General Moltke, and the days of his years are threescore years and ten. We will leave military critics to do justice to the military genius of Moltke, and to say where he is to be placed in comparison with Grant, and Wellington, and Napoleon, and Marlborough, and the older heroes of the world. What we design now is much more simple, but equally interesting. The "still strong man," about whom one hears so little, who can be "interviewed" only by Bismarck and by the royal family of Prussia, and without whom all Bismarck's grand designs might have been unavailing, the man who is renewing the art of war, and concentrating with such terrible efficiency the whole force and manhood and discipline of Germany, is seventy years old. The King of Prussia, himself seventy-three, has made him a count in honor of his seventieth birthday; but to us it is far more interesting to know that he has reached that age, than to hear that he has become Count Moltke. Grant is not yet fifty years old. Marlborough was all done with war by the time he was about sixty. Napoleon died at the age of fifty-two. Wellington's military career was over before the age at which Moltke began to distinguish himself. Indeed, before the war with Austria, Moltke had kept his power and his genius very much to himself.

Here, then, is a point for physiologists, that a man of seventy may alter the complexion of the world, and the relation of nations, and the history of civilization; that he may at this age have physical power for going through arduous bodily exertion, and mental power for solving the most tremendous military problems. Meantime let the example of Moltke cheer old men, and make many young men more modest.—*Lancet.*

Metz.—The condition of the garrison and inhabitants of Metz appears to have been deplorable during the siege. There was, according to the correspondent of the *Daily News*, an absence of chloroform, ether, and carbolic acid, for five weeks before its surrender. Thirty-five thousand persons are said to have perished during the siege in the town alone, the greater

part from want of proper care. Upward of 19,000 sick and wounded were present in the garrison.—*Lancet.*

Local Treatment of Cancer with Pancreatic Juice.—The subject of the second question for discussion before the recent Medical Congress of Florence was the local treatment of cancer. In addition to removal by surgical interference, which was sustained by the majority of surgeons as the only efficacious means of cure, attention was called to two communications: the first, from Dr. Neftel, of this city, upon the effects of electrolysis; the second from Prof. Schiff, upon the action of pancreatic juice. This physiologist has experimented, upon two fragments of the same cancer, with gastric and pancreatic juice. He concludes by attributing a greater value to the last, which, according to his investigations, digests the tumor without attacking the blood-vessels and exposing the patient to hæmorrhages. The gastric juice destroys all the tissues, while the pancreatic juice attacks only the cancer-cells.

Complete Absence of the Uterus.—Mr. A. Dumas reports (*Montpellier Méd.*, October, 1869) a case in which the diagnosis could not be confirmed by autopsy; and as we know how often, even in the dissecting-room, simple cases of bifid uterus with atrophied neck have been taken for a total absence of the organ, it is well, in the case related, to be reserved as to the diagnosis.

The patient, twenty-three years old, had never menstruated, nor had any supplementary hæmorrhages. She had suffered from no lumbar or abdominal periodic pains. She has an instinctive repugnance for marriage; and has never experienced the least sexual desire, nor been attracted by men's company. There is complete absence of the breasts, in the place of which is seen a minute nipple, surrounded by a pale and narrow areola. Her general appearance as to contour, delicacy of integument, expression, voice, walk, etc., is thoroughly feminine.

On examination of the genital organs, the mons veneris was found almost entirely devoid of hair; labia majora thin and compressed; the hymen was perforated; vagina narrow; and the meatus urinarius normally situated; the clitoris is provided with its hood, and is of normal size. At the *cul-de-sac* of the vagina there is a slight, imperforated prominence, conoid in shape, of pale color, and of the size of a small pea. The finger, introduced into the rectum, comes readily into contact with a catheter, which had been passed into the bladder. On inserting a cylinder or plug the full length of the vagina, the hand easily brings the end of the catheter in contact with the extremity of this vaginal cylinder. The finger in the rectum

can also be readily placed upon the same point, thus proving that the uterus is entirely wanting.

The author is inclined to believe also in the absence of the ovaries and other annexæ, on account of the negative signs furnished by the rectal touch and hypogastric palpation, and from the entire absence of the menstrual molimen. However, he is less positive on this point than upon the absence of the uterus.

The Wine-Supply of Paris.—The *Pall Mall Gazette* says that, if all the fermented liquors that pay the *octroi* duty are consumed in Paris, the inhabitants manage to dispose in the course of the year of no less than 365,000 tuns of wine—equal to forty-four gallons per head of the population, or almost a pint a day for every man, woman, and child, in the French capital; and this, too, in addition to 225,000 barrels of beer, nearly a couple of million gallons of cider, and more than that quantity of spirits. The authorities in Paris state that the water-supply of the city cannot be stopped by the Prussians; and the two immense depots which furnish France with wine are both within the line of the fortifications, and quite full. There appears, therefore, to be little fear of suffering from thirst, whatever prospect there may be of misery from starvation.

Dr. George Johnson reports (*British Medical Journal*) a case of lead-poisoning in which the source of the lead was traced after much trouble to the material in which the patient was a worker. He was a portmanteau-maker, and it appears that the cloth used in the manufacture was glazed with some preparation of lead. These cloths are largely employed in making trunks, valises, etc.

The library of the late Professor von Gräfe is in the possession of Hirschwald, the well-known Berlin publisher and bookseller, who is about to publish a catalogue of it.

The subject of the introductory lecture of Dr. Mapother, at St. Vincent's Hospital, Dublin, delivered October 31st, was "American Medicine."

THE

NEW YORK

MEDICAL JOURNAL.

EDITOR:

EDWARD S. DUNSTER, M. D.

VOLUME XII.

NEW YORK:
D APPLETON AND COMPANY,
90, 92 & 94 GRAND STREET.
1870.

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Phosphoric acid is capable of combining with bases of almost any kind and of several kinds at once, and in any proportions, from one of phosphoric acid to one of base, to one of phosphoric acid to three of base. Besides these bases, it will take into its combination salts, neutral bodies, as starch, and even other acids, as well as water, glycerine, and fats, presenting, in this range of affinities, characteristics, that are without example in the whole domain of chemistry. These bases or salts may be more or less withdrawn by very inconsiderable modifications in the temperature or density of the surrounding fluid. Even carbonic acid will withdraw the third atom of base from neutral phosphate. Endosmosis and exosmosis will resolve it into new groups, relatively more and less colloid—one having more and the other less of phosphoric acid.

These phosphates are involved in all waste and repair. They are consumed with every effort. The quantity secreted from the kidneys, always considerable, is increased by labor of the muscles, or of the brain. Professional men, whose work is periodical, as clergymen and advocates, remark the augmentation of the phosphatic secretions that follows unusual mental effort. The amount of this secretion may be influenced in various ways. While exhaustion increases it, alcohol and coffee lessen it. Acute and chronic diseases vary the amount and character of the secreted phosphate: and whether phosphates of alkalies or alkaline earths shall predominate, is determined by the character of the diet.

Some surgeons think they have remarked the more prompt knitting of the bones after fracture, where powdered phosphate of lime, as such, has been added to the diet. Some dentists urge the addition of phosphate of lime to food, with a view to strengthening defective teeth. Tribasic phosphate of lime, dissolved in phosphoric acid, has been employed with success in some forms of debility. Numerous physicians administer phosphoric acid, in various forms of combination, for cerebral and nervous disorders.

The above considerations unite to make the field of phosphatic medicine one of great promise to the faculty, and an inviting one for research.

The following observations may aid physicians as a starting-point for the study of the subject in new directions. It has been noticed for several years past, that a form of liquid acid phosphate, employed as a constituent in the preparation of Horsford's phosphatic bread preparation, was used by the workmen and their families as a medicinal agent. Through accident, or curiosity at first, and afterward from its observed effects, they had been led to its use to such an extent, that it was conceived to be a specific in certain forms of *dyspepsia*, in *wakefulness, and in certain affections of the bladder or kidneys.* Physicians in the neighborhood, acting upon these intimations, prescribed the acid phosphate liquor with marked success. Their example has been followed by others in larger practice and in other localities, with such remarkable results, that, in view of the demand which has arisen, the whole subject has received a careful investigation in the light of the most recent physiological researches, and a strength, and special and constant composition given to the fluid, which will enable the physician to see at a glance the precise quantitative relations of the most important ingredients in a given volume of liquid.

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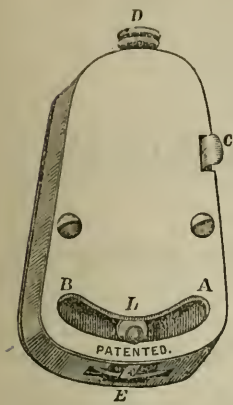

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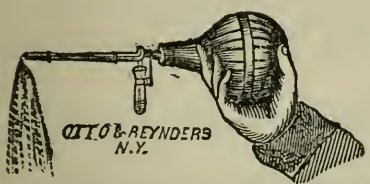

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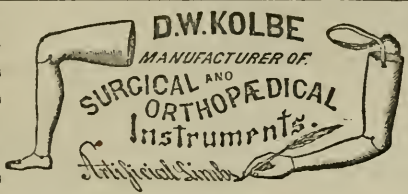

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RESOURCES FOR CLINICAL INSTRUCTION

Afforded by the College Hospital, the Dispensary for Out-door patients, St. Peter's Hospital, the Brooklyn Eye and Ear Hospital, and various other Charities in the City of Brooklyn.

The Long Island College Hospital receives Medical, Surgical, and Obstetrical cases, which are, during the teaching term, placed in the care of the Professors of Medicine, Surgery, and Midwifery.

The Hospital being under the control of the Regents of the College, and exclusively at the service of the teaching department, gives the class unsurpassed opportunities for bedside instruction; for the practice of Auscultation and Percussion, the study of Minor Surgery, the application of Bandages, private examinations with the Speculum, observation of the phenomena of Labor, the use of the Laryngoscope, the Ophthalmoscope, the Thermometer, etc., etc.

The ***Lecture-rooms,*** the wards of the Hospital, and the rooms in the Dispensary for out-patients, have all been constructed with a view to convenience in Clinical teaching.

OUT-DOOR DEPARTMENT.

In connection with the Hospital is a ***Dispensary Department,*** which treats annually over 8,000 patients. The value of instruction in this department consists greatly in the fact that the class of cases is such as the busy practitioner encounters in his every-day practice. It thus supplies a want long felt and recognized in our systems of Clinical instruction. Unlike much of Hospital experience, disease is met with here in its *earliest stages of development;* so that, by passing from the Dispensary to the Hospital, the Clinical teacher is enabled to present every phase of disease in every stage of development.

St. Peter's Hospital, in charge of the Sisters of the Poor of St. Francis,

is a well-organized institution situated near the College Hospital, has 100 beds, and is in the constant receipt of medical and surgical cases. Prof. Smith is the Attending-Surgeon, and will present such cases of surgical practice, from time to time, as may be of interest to the student.

The Department of Diseases of Females is one of the most interesting fields for Clinical teaching in connection with the College. The material for instruction is varied and abundant; the rooms in the Dispensary and female wards of the Hospital have been constructed with a special view to convenience in teaching, and every facility is afforded the student for the practical study of this important class of diseases.

The Brooklyn Eye and Ear Hospital furnishes excellent opportunities for the study of Ophthalmic and Aural Surgery. It treats over 2,000 patients annually. Drs. Agnew, Loring, Prout, and Matthewson, are among the attending-surgeons, and, through their courtesy, every facility for acquiring practical knowledge of diseases of the EYE and EAR will be afforded the students of the Long Island College Hospital.

PRACTICAL ANATOMY.

Unusual facilities will be offered for the study of Practical Anatomy under the direction and superintendence of the Professor of this Department, whose dissections and demonstrations are made in the presence of the class. This *demonstrative* mode of teaching Anatomy is a *peculiar feature* of the Long Island College Hospital, and has given great interest to this department of instruction.

There is no lack of anatomical material, the Faculty furnishing subjects *free of charge.*

PRACTICAL OBSTETRICS.

Members of the Senior class, in addition to the instruction in the Lecture-room, in the Hospital, and at the Obstetrical clinic, will have the opportunity

of attending cases of labor, which will be under their own management, except in cases of unusual difficulty, when they will be assisted by the Professor of Obstetrics.

COLLEGE HOSPITAL BUILDINGS.

The Long Island College Hospital buildings are situated at the junction of Pacific and Henry Streets. From New York they are most readily reached by crossing the East river at the South Ferry.

The original ***Hospital Building*** has been recently greatly altered and improved, a large additional building, containing the most modern improvements in ventilation, etc., has been added, and greatly increased facilities for bedside instruction and study have been thus provided.

The Dissecting-Rooms have been much improved under the direction of the Professor of Anatomy. They are well ventilated and lighted, and supplied with water, etc., and will be open during the session under the care of the *Demonstrator*.

REQUIREMENTS FOR GRADUATION.

The candidate must be twenty-one years of age, and must present proper testimonials of a good moral character, and satisfactory evidence that he has studied medicine for *three* years with a physician and surgeon duly authorized by law to practise his profession. He must have attended two full courses of lectures—the *last* of which must have been in the Long Island College Hospital. He must pass a satisfactory examination, and submit to the authorities of the College an acceptable thesis on some subject connected with medicine, in his own handwriting.

FEES.

Full Course of Lectures	$100
Matriculation Fee	5
Demonstrator's Fee (including material)	5
Graduation Fee	25

Tickets to the Hospital are gratuitous.

All fees, except the graduation, *must be paid at the beginning of the session.*

The matriculation ticket must be taken out before any other ticket can be obtained.

Students may take out the tickets of such departments of instruction as they desire to attend.

Students who have attended two full courses of lectures in other accredited schools are required to pay $50 for all the tickets to the lectures of this College.

Students intending to graduate, who have attended two full courses in this College, or who have attended one full course in this College, *after* having attended one full course in some other accredited school, will be required to matriculate only.

Graduates of other Medical Schools, *before* the expiration of three years from the date of graduation, are required to pay a lecture fee of $50; *after* the expiration of three years they will pay only the matriculation fee.

Students are requested, on their arrival in the city, to report at once at the College, corner of Pacific and Henry Streets, that they may be aided in obtaining board without delay. Board, including room rent, can be procured at from $5 to $6 per week and upward, according to the habits and tastes of the student.

The city of Brooklyn contains over 400,000 inhabitants, being the third city of the United States in point of population. Considering the character of the city, its salubrious and beautiful situation, the abundant facilities its institutions afford for clinical instruction, and its proximity to New York, it has been found to be peculiarly suited to become the seat of a medical school, holding its sessions during the *Spring* and *early Summer* months.

Persons desiring further information, or circulars, are requested to address either the Dean of the Faculty, Prof. S. G. Armor, or the Registrar, Prof. Jarvis S. Wight, in care of Long Island College Hospital, Brooklyn, N. Y.

GRADUATES, 1870.

P. B. Plotts.....Pennsylvania.
A. J. Lawbaugh.....Illinois.
Henry N. Read.....Virginia.
Charles R. Upson.....Connecticut.
P. V. Murray.....New York.
H. J. Winnett.....Pennsylvania.
Daniel B. Wylie.....Wisconsin.
Charles H. Myers.....New York.
J. Clinton Shrader, M. D.....Iowa.
William M. L. Wells.....Pennsylvania.
James Nicolson.....New York.
A. A. Chapman.....Virginia.
William H. Winslow.....Pennsylvania.
Jonas Stewart.....Indiana.
William E. Tucker.....Massachusetts.
Samuel E. Stiles.....New York.
F. B. Winnett.....Pennsylvania.
Andrew C. Bergen.....Iowa.
Walter Mott.....New York.
Alexander L. McLaren.....Ontario.
James D. Kirk.....Pennsylvania.
Otis J. Eddy.....New Jersey.
Jacob T. Ambrose.....Pennsylvania.
Alexander C. Douglas.....Alabama.
Gonzalva C. Smythe, M. D.....Indiana.
Thomas S. Nagle.....Pennsylvania.
R. O. B. Orr, M. D.....Missouri.
S. S. Bachman, A. M.....Pennsylvania.
Samuel C. Cravens, M. D.....Indiana.
Andrew R. Prowell.....Pennsylvania.

☞ Alumni of the College who are permanently settled, and other medical practitioners, who desire to receive the Circular regularly, are respectfully requested to send their names and addresses to the Registrar. Alumni are also requested to send notices of change of residences.

LONG ISLAND COLLEGE HOSPITAL.

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THE UNITED STATES AND CANADA.

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS OF 1870-'71.

THE COLLEGIATE YEAR in this Institution embraces a Preliminary Autumnal Term, the Regular Winter Session, and a Summer Session.

THE PRELIMINARY AUTUMNAL TERM for 1870-'71 will commence on Wednesday, September 14, 1870, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, exclusively by members of the Faculty. Students designing to attend the Regular Session are strongly recommended to attend during the Preliminary Term, but attendance during the latter is not required. During the Preliminary term clinical and didactic lectures will be given in the same number and order as in the Regular Session.

The REGULAR SESSION will commence on Wednesday, October 12th, and end about the 1st of March, 1871.

FACULTY.

ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, and President of the College.

JAMES R. WOOD, M. D., LL. D., Emeritus Prof. of Surgery,

FORDYCE BARKER, M. D., Prof. of Clinical Midwifery and Diseases of Women.

FRANK H. HAMILTON, M. D., LL. D., Prof. of Practice of Surgery with Operations and Clinical Surgery.

LEWIS A. SAYRE, M. D., Prof. of Orthopedic Surgery and Clinical Surgery.

ALEXANDER B. MOTT, M. D., Prof. of Surgical Anatomy with Operations and Clinical Surgery.

W. H. VAN BUREN, M. D., Prof. of Principles of Surgery with Diseases of the Genito-Urinary System and Clinical Surgery.

BENJAMIN W. McCREADY, M. D., Prof. of Materia Medica and Therapeutics and Clinical Medicine.

GEORGE T. ELLIOT, M. D., Prof. of Obstetrics and Diseases of Women and Children and Clinical Midwifery.

STEPHEN SMITH, M. D., Prof. of Descriptive and Comparative Anatomy and Clinical Surgery,

AUSTIN FLINT, M. D., Prof. of Principles and Practice of Medicine and Clinical Medicine.

R. OGDEN DOREMUS, M. D., Prof. of Chemistry and Toxicology.

WILLIAM A. HAMMOND, M. D., Prof. of Diseases of the Mind and Nervous System and Clinical Medicine.

AUSTIN FLINT, JR., M. D., Prof. of Physiology and Microscopy, and Secretary of the Faculty.

Special Lectures in the Regular Term.—OPHTHALMOLOGY, by Prof. Henry D. Noyes, M. D. DISEASES OF THE SKIN, by Prof. Foster Swift, M. D.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The union of clinical and didactic teaching will also be carried out in the Summer Session, nearly all of the teachers in this Faculty being physicians and surgeons in the Bellevue Hospital and the great Charity Hospital on Blackwell's Island.

This Session will consist of two Recitation Terms: the first from March 14th to July 1st, and the second from September 1st to the opening of the Regular Session. During this Session there will be daily recitations in all the departments held by members of the regular Faculty and their assistants. Regular clinics will also be held daily.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures	$140 00
Matriculation Fee	5 00
Demonstrator's Ticket (including material for dissection)	10 00
Graduation Fee	30 00

FEES FOR THE SUMMER SESSION.

Matriculation (Ticket good for the following Winter)	$ 5 00
Recitations and Clinics	35 00
Chemical Laboratory (including material)	25 00
Dissecting (Ticket good for the following Winter)	10 00

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address the Secretary of the College, Prof. AUSTIN FLINT, JR., Bellevue Hospital Medical College.